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THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—

Pharmaceutical Society of Ireland.
 South African Pharmaceutical Association.
 Pharmaceutical Society of Natal.
 Central Pharmaceutical Association of N.Z.
 Otago Pharmaceutical Association.
 Pharmaceutical Society of Queensland.
 Pharmaceutical Society of South Australia.
 Pharmaceutical Society of Western Australia.

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COLONIAL TRADE.

THE next issue of THE CHEMIST AND DRUGGIST will be one of special value to advertisers, as it is intended to promote trade with retail druggists and buyers of druggists' goods generally in the more important British colonies and India, as well as China and Japan and other countries where good business is to be done, but is difficult to get at. We have by means of revised registers, which include lists supplied to us by our agents in Australasia, Canada, India, Japan, West Indies, and South Africa, ensured that the circulation of this Colonial Number will be to business men who are not deadheads, and we feel sure that the number will be a good one for any firm to commence advertising in THE CHEMIST AND DRUGGIST or to make a specially appropriate and effective advertisement. The circulation referred to will, it should be noted, be in addition to the ordinary week-to-week circulation at home and abroad. In order that we may catch the colonial and foreign mails we must put displayed advertisements to press on Wednesday next, April 22, and advertisers who have not secured space should communicate with the publisher at once.

Summary.

IN regard to bargains, see p. 556.

SOME more pictures for our headlines are printed on p. 553.

THE Preliminary examination questions given this week are printed on p. 547.

ANOTHER "draper-druggist" has been added to the number in London (p. 541).

THE anti-cutting meeting this week was held in Birmingham, and we report it (p. 560).

THE names of successful candidates at the Irish pharmaceutical examinations are given on p. 542.

THERE appears to be a recrudescence of carbolic-acid poisoning for we report a large number of cases (p. 541).

WE print a note in regard to an interesting form for the administration of iodine—viz., as iodotannic compounds (p. 555).

A NOTE which we inserted last week regarding "Mist. Stokesii" has brought us interesting communications printed on p. 570.

THE Shops (Early-closing) Bill did not come on for consideration in the House of Commons this week. It is now set down for June 10 (p. 543).

THERE is a point of similarity between paper pulp and absorbent cotton, in which chemists and druggists are interested, referred to on p. 546.

THE death of a Berlin doctor's child after a prophylactic dose of diphtheria-antitoxin has raised a hurricane of opposition around that new remedy (p. 556).

CINCHONA and drug sales were held in London this week, and we report upon them (p. 562). We also give a price-list of heavy chemicals, oils, &c., on p. 566.

THE proprietors of Goudron de Guyot have obtained heavy damages in a French court for infringement of their rights by a maker of a tar-liqueur (p. 544).

DRS. BEHRING AND ROUX have between them received a prize of 1,000*l.* from the French Academy of Medicine for the discovery of diphtheria-antitoxin (p. 544).

STUDENTS have not done badly in their analysis of the mixture of salts sent to them last month, but some have found things in it which were not there (p. 540).

MR. WATSON SMITH has ascertained that if pure wool is boiled with a solution of an ammonia salt, free ammonia is given off. He explains this in an interesting way (p. 545).

NAVAL HOSPITAL DISPENSERS who are "Minor" men may, according to a new regulation, be appointed as store-keepers, a privilege previously reserved for "Majors" (p. 557).

THE therapeutics and commerce of tobacco are dealt with in exceptional style by Mr. Alfred Adams, of Belfast, who speaks from personal knowledge of the manufacture of "the weed" (p. 551).

THE metric system is not the unmixed blessing that its formulators imagined it to be. From a discussion which has taken place in the *Times*, it seems that for trade purposes it would not be superior to our own system, and it is not at all likely to be made compulsory in the British Isles during this generation (p. 554).

MR. LIVERSEEGE, in an exhaustive note on tincture of myrrh, in the course of which recent work on the subject is reviewed, shows how it is best prepared and assayed. He mentions the proper percentage of alcohol and extractive in the tincture, and has ascertained how commercial samples compare with the standard (p. 553).

THE West Indian Islands supply us with several items in regard to the practice of pharmacy and medicine. At Barbados the regulations for the new examinations have been formulated and approved; in Jamaica an attempt has been made to suppress by legislation prescribing and visiting druggists; and in Trinidad a new pharmacy law has been adopted (p. 545).



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Wednesday, April 22, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, May 2. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts of which the mixture is composed.

REPORTS.

The powder issued for analysis last month consisted of equal parts of magnesium carbonate, potassium nitrate, and sodium sulphite. Its calculated composition was—

Mg	..	..	..	..	..	8.38
K	..	..	..	..	..	12.87
Na	..	..	..	..	..	5.01
CO ₃	..	..	..	..	..	15.71
SO ₃	..	..	..	..	..	8.71
NO ₃	..	..	..	..	..	20.46
O	..	..	..	..	..	1.40
H ₂ O	..	..	..	..	..	27.46
						100.00

The impurities present were slight traces of iron and chlorine, and a rather considerable trace of sulphuric acid.

There were 68 packets of the powder issued to applicants and 43 reports of analyses were received. The failures in the detection of the several constituents of the powder, as recorded in the reports, were:—Magnesium 1, potassium 2 sodium 1, carbonic acid 6, sulphurous acid 9, nitric acid 7.

It would seem from the above figures that our correspondents were remarkably successful in the detection of the metals in the mixture; their accuracy was, however, not so great as would appear. In several cases metals were reported present which formed no part of the mixture, notably aluminium and calcium. In each case the error arose from the same cause—the omission to employ a sufficiency of ammonium chloride to prevent magnesium being precipitated as hydroxide or carbonate. This is an error to which the beginner is very liable, and it is difficult to lay down a rule regulating the quantity of the reagent to be employed. The slow formation of the magnesium precipitates, or their general appearance, may suggest to the more experienced student that there is something wrong. The discovery that a further addition of ammonium chloride dissolves the precipitate confirms the suspicion and avoids error. The best resource for the novice is to use ammonium chloride liberally; the evils arising from an excess of the reagent are more easily dealt with than those arising from an insufficiency.

The association of a carbonate and a sulphite gave some

trouble. Both acids revealed their presence by a rather brisk effervescence on the addition of an acid to the powder. Owing to the great solubility of sulphur dioxide in water it was not in every case detected by smell; warming the liquid made the presence of the gas at once evident. On the other hand, some of our contributors noticed the smell of sulphur dioxide at once, and concluded rather hastily that its evolution was the sole cause of the effervescence, a supposition that would at once have been corrected by bringing the evolved gas into contact with lime-water.

PRIZES.

The First Prize for the best analysis of the mixture of salts has been awarded to

W. G. STRATTON, care of Mr. E. H. Farr, F.C.S., The Laboratory, Uckfield, Sussex.

The Second Prize has been awarded to

M. K. WATT, 16, South Mount Street, Aberdeen.

MARKS AWARDED FOR ANALYSES.

W. G. Stratton (1st prize)	..	100	J. Dyson	..	..	78
M. K. Watt (2nd prize)	..	99	Q. ..	..	..	78
St. Michael	..	98	W. C. Pickering	..	..	77
Felspar	..	97	Franciscus	..	..	77
Petal	..	96	Elemi	..	..	76
Constant	..	95	First Return	..	..	76
A. W. Jones	..	94	Unsigned Report	..	..	75
T. M.	..	94	A. H. Rees	..	..	75
E. Ashworth	..	93	Pat	..	..	75
E. Ockenden	..	91	H. W. Harrie	..	..	74
H. Burns	..	90	A. B.	..	..	74
Sulphovin	..	89	Alpha	..	..	73
Dexter	..	83	Campanulate	..	..	72
H. E. W.	..	88	A. B. C.	..	..	70
Stow	..	86	Disce aut Discede	..	..	70
W. B. Nelson	..	85	A. P. Smith	..	..	65
Cumbria	..	85	G. W. G.	..	..	60
Ammonium Isolator	..	84	W. T. C.	..	..	55
H. H. North	..	84	Bright One	..	..	45
Patience	..	83	T. H. T.	..	..	40
C. J. Packham	..	80	Rosicrucian	..	..	30
Ireland	..	79				

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

E. ASHWORTH.—You omitted to append your name and address to your report.

C. J. PACKHAM.—The precipitate you obtained with silver nitrate was silver sulphite; it dissolved in dilute nitric acid to an almost clear solution. The slight turbidity was due to a trace of chlorine.

IRELAND.—The test depending upon ignition with a cobalt salt is only applicable to colourless infusible substances. Many fusible salts dissolve cobalt oxide in much the same way as borax does.

J. DYSON.—With closer observation you might have noticed that part of the powder fused at a high temperature, cooling to a colourless mass; if manganese had been present the mass would have been green.

Q.—It is not clear how you applied the lime-water test to the evolved gas. It was possible, by careful decantation, to transfer the gas to a test-tube containing lime-water; but a better plan was to aspirate the gas through lime-water.

W. C. PICKERING.—You relied too much on the effervescence being due to a sulphite alone.

FRANCISCUS.—See remarks to W. C. Pickering.

ELEMI.—You did not mention any experiment that would have revealed the presence of a nitrate.

FIRST RETURN.—You should have obtained an indication of a nitrate in the preliminary examination; when the powder was strongly heated in a glass tube nitrous fumes were evolved.

A. H. REES.—The effervescence was not so simple as you supposed. Carbon dioxide was first evolved; afterwards, and especially on heating, sulphur dioxide was copiously given off.

PAT.—The sulphur dioxide you detected in the gas evolved on warming,

with hydrochloric acid should not have been passed over without some attempt to explain its presence.

H. W. HARRIE.—It was important to note the smell of the gas evolved by the action of acids. See remarks to A. H. Rees.

ALPHA.—If you had compared the flame-colouration with that produced by a pure potassium salt, you must have noticed that there was a great difference. The yellow colour due to sodium almost obscured the violet of the potassium present, though the latter was in much larger quantity.

CAMPANULATE.—There was no trace of carbonisation either on heating the powder alone or with sulphuric acid.

A. B. C.—The precipitate you obtained with sulphuretted hydrogen consisted of sulphur; it did not in the least resemble the orange-coloured antimony sulphide.

DISCE AUT DISCEDES.—There was no necessity for boiling with sodium carbonate preparatory to examining for the acids. You had found that the insoluble part of the powder was magnesium carbonate, and that phosphates were absent. You would probably have succeeded in detecting the nitrate if you had operated upon the original aqueous solution. Your method of recording the results answers very well.

A. P. SURRY.—You named a carbonate as one of the constituents of the powder, but you said nothing about the detection of a carbonate. You did not even mention effervescence as a result of adding an acid to the powder.

G. W. G.—You proved organic salts absent in the preliminary examination, and later on you concluded that a tartrate was present. The production of metallic silver that you noticed was due to the decomposition of silver sulphite.

W. T. C.—Even without the aid of a blue glass the potassium flame-colouration could be observed when the salt was ignited.

BRIGHT ONS.—See remarks to "W. T. C." and to "A. B. C."

T. H. T.—A powder containing the constituents you detected would have dissolved easily in water; the powder you examined was not soluble in water.

ROSICRUCIAN.—The precipitate you obtained with ammonia was simply magnesium hydroxide. You did not add enough ammonium chloride to prevent its formation.



Another Drapery Drug-store.

In their annual report to the shareholders the directors of D. H. Evans & Co. (Limited), drapers, Oxford Street, London, state that they are about to open a drug and dispensing department, the premises at Nos 300 and 302 Oxford Street having been acquired, and are now undergoing alterations in order that this new department may be carried on.

A Peaceful Settlement.

On Friday, April 10, Mr. A. Fieldsend, chemist, Penistone, near Sheffield, was charged before the Magistrates with assaulting his mother, Mrs. Harriet Fieldsend, in the London and Yorkshire Bank at Penistone on March 23. When the case was called Mr. Joseph Wade, the manager of the bank, who had been subpoenaed as a witness, had not arrived, whereupon counsel for complainant suggested a peaceful settlement of the case, because if it were gone into some purely personal and family matters would have to be made public. Defendant's counsel, while not admitting the assault, did not (for the sake of peace) object to his client being bound over, and explained that the whole matter arose out of a family feud regarding the father's will. Mrs. Fieldsend then gave formal evidence, and the Bench ordered defendant to be bound over for six months and pay the costs.

Drug, &c., Contracts.

The following tenders have been accepted:—

BURROW-IN-FARNESS (Union).—W. B. Dick & Co. (Limited), linseed oil, turpentine, crude varnish, Berlin black, &c.; H. F. Wright, jun., machinery oil, colza oil, dryers, &c.; J. Riley & Sons (Limited), sulphuric acid and sulphate of iron.

CAMBRIDGE (Addenbrooke Hospital).—R. H. Young, carbolic soap, 20s 6d. per cwt.; borax, 3d. per lb. Lilley & Co., olive oil, 4s. per gallon; pure linseed oil, 1s. 11d.; spirit of turpentine, 1s. 11d.

CHERTSEY (Union).—A. W. Gerrard, disinfectants.

ISLE OF THANET (Union).—George Mence Smith, Ramsgate, best mottled soap, 18s. per cwt.; best yellow, 18s 9d. per cwt.; soda, 2l. 10s. per ton.

LEEDS (Waterworks).—Messrs. Calvert & Co., manufacturing chemists, Manchester, Sanitas Company (Limited), London, and the Sanitary Dry Lime Company, Bootle, disinfectants; T. Ridley, sulphur.

ST. ALBANS (Union).—D. Pike & Sons, St. Albans, brimstone, 14s.; disinfectant-powder, 18s. per cwt.; yellow soap, 18s. per cwt.; mottled soap, 19s. per cwt.; soft disinfectant-scrap, 11s. per firkin; soda, 2l. 10s. per ton; starch, 3d. per lb.

YARMOUTH (Union).—T. J. Greenacre, soft soap, 2s. 6d. per stone; colza oil, 3s. per gallon; paraffin oil, 8d. per gallon; carbolic soap, 25s. per cwt.; roll sulphur, 1s. 4d. per lb.; blue, 7d. Stacey & Co., beeswax, 1s. 4d. per lb.

Cashing Worthless Cheques.

Mr. Frank W. Mays, chemist, Reading, was one of the victims of an insurance agent, Henry Kempson (42), who got two months' hard labour at Reading last week for cheque frauds. On September 18 and October 4 last year he got Mr. Mays to cash cheques for 8l. 7s. 11d., asking him to hold them over for a time. Further sums were obtained from another Reading tradesman, and neither got his money, prisoner having disappeared and the bank manager having asked the account to be closed on October 8.

Wholesale Druggists' Customer Committed.

At the London Mansion House on Friday, April 10, George Thomas Millership (42), dispenser, was charged on remand before Alderman Sir Stuart Knill with obtaining drugs by false pretences from Messrs. Baiss Brothers & Co., wholesale druggists, Jewry Street, Aldgate, and from Messrs. Burgoyne, Burdidges & Co., wholesale druggists, Coleman Street. It was alleged that the prisoner, having represented himself to be Dr. Miller, got the goods sent to an address which he gave and did not pay for them. It was also alleged that the prisoner, in the name of Millership, subsequently attempted, by similar false pretences, to obtain other drugs from Messrs. Burgoyne, Burdidges & Co., but the drugs were not sent to him. He was committed for trial.

Thought it was Gin, Drank it, and Died.

That is the sad history of Ellen Hant, wife of a Bath umbrella-maker. He had a bottleful of the usual silveing-solution (solution of mercury in nitric acid), and she took it in mistake for gin. She was treated in the hospital, but left it, and died—from the effects of the corrosive poison, said Mr. Jarvis, surgeon, one of the witnesses at the inquest.

"For Disinfecting purposes."

As if to draw the attention of legislators to the freed m with which carbolic acid can be obtained, a recrudescence of fatalities with the poison set in when Parliament resumed its sitting. Here are particulars of a few cases which have come under our notice since last week:—

Mrs. Eliza Fowler (57), residing at 46 Derby Street, Hull, quarrelled with her daughter on Tuesday last week, and shortly after took a dose of carbolic acid, which proved fatal.

"Lying in the gutter dead with a carbolic acid bottle" is the last said of Mr. C. Slaney, an insurance-agent at Trebursye, Cornwall. A batcher made the discovery last Friday morning, and Dr. Thompson's report to the Coroner's jury enabled them to bring in the usual verdict.

Last Thursday evening (the 9th) Thomas Llewellyn (62), a Chorlton-on-Medlock carver, went to the Manchester Royal Infirmary, and said he had taken carbolic acid. He became unconscious, and died shortly afterwards. In one of his pockets was a piece of paper, on which was written, "Give my body to the Infirmary. I am distracted." His daughter

thought he was the last person in the world to take his own life.

Ellen Haley (21), a domestic servant and single, resided with her mother in the Marylebone district of London. She had been low-spirited, and her mother managed to prevent her committing suicide several times. At last she got a boy to get her twopennyworth of carbolic acid—"for disinfecting-purposes" he had to tell the oilman. She was afterwards found lying in the street in a dying state, and was taken to St. Mary's Hospital, where she expired "from the effects of carbolic acid poisoning."

"Death by misadventure" is the verdict which a Yarmouth Coroner's jury have returned in the case of Mrs. W. H. Heal (40), wife of a former quartermaster of the Suffolk Hussars, now traveller to Lacons (Limited). Mrs. Heal was intemperate. The governess of the family stated in evidence that she believed deceased went through the kitchen, up the back stairs, took a bottle of carbolic acid out of the bedroom cupboard, drank from it in the kitchen, and returned it to the cupboard, where it was subsequently found. Dr. T. H. Moxon tried all he could for the poor woman, but the case was absolutely hopeless.

On Tuesday Jabez Colley (23) died in the West Bromwich District Hospital from the effects of carbolic acid, which he had drunk because he was out of employment.

Joseph Dutton (30), of Kingsley, near Runcorn, poisoned himself with carbolic acid on Tuesday. He had suffered from influenza.

Police constable Burfoot has a beat in Rotherhithe, and while on it one day last week Esther Diver (46), a poor needlewoman, told him she had taken carbolic acid. He promptly brought it up with an emetic, thereby saving her life (said the doctor); then he took her up, and at the Greenwich Police Court she was treated as an insane person.

Thefts.

At the Warwickshire Quarter Sessions, John Thomas Luckman was sentenced to a month's hard labour for stealing two dozen jars of Liebig's extract of meat, three dozen tablets of 4,711 soap, and three dozen tablets of Pears' soap, from the premises of Mr. John William Asford, chemist, Coventry.

Was it Boracic Acid?

Dr. M. K. Robinson, one of the medical officers for East Kent, condemns the use of boracic acid in food-preservatives; and in his annual report states the use of boracic acid as a basis in some preservative put into some milk from which blanc-mange was made was the cause of a very sudden and serious illness among the inmates of a religious institution in his district. Some of the blanc-mange was given to nine fowls, and all of them suffered very badly, five dying, though they were strong and healthy birds. Dr. Robinson contends that the drug should be recognised as an injurious adulteration in food-preservatives.

Death from Sulphonal poisoning.

Last week Mr. T. Hoyle, coroner, Newcastle, held an inquiry regarding the death of John Dillon (69), a chemist's traveller, who resided in Howard Street, Sheffield, and had died in the Newcastle Royal Infirmary. From the evidence of his niece it appeared that they had been in Newcastle a fortnight, and she had called at his lodgings the night before his death, when he was in good health. He was troubled with sleeplessness, for which he had been in the habit of taking some lozenges or tablets. The landlady of the house in which Dillon resided stated that her attention was called to Dillon by him falling out of bed twice. On the second occasion she attempted to prevent him taking four or five tablets, but he pushed her aside, and told her to mind her own business, at the same time swallowing the tablets. He was assisted into bed, but again fell out, and witness covered him over with the bedclothes, and left him on the floor. From midnight to 5 A.M. she saw him three times, and he seemed to be sleeping all right, after which he was taken to the Royal Infirmary. The medical evidence was to the effect that Dillon suffered from cerebral hæmorrhage rather than from poison, and the Coroner ordered a *post mortem* examination. On resuming the inquiry on April 8 the doctor did not appear, and the Coroner, after waiting some

minutes, commented severely on the absence of such an important witness. He said he would again adjourn the inquiry, and if the doctor did not give an explanation he should fine him for not being there at the proper time. On Thursday night Dr. Clay, who made the *post mortem*, explained that he had mistaken the time the previous night. He had found that Dillon suffered from extensive disease of the kidneys and slight disease of the lungs. Death was due to an overdose of sulphonal, which had acted powerfully upon deceased owing to the diseased state of the kidneys. A healthy person would in all probability have thrown off the effects of the drug. A verdict in accordance with the medical evidence was returned.

British Association.

The local committee of this Association have now completed the preliminary arrangements for the meeting to be opened in Liverpool on September 16, when Sir Joseph Lister, the President, will deliver his address in the Philharmonic Hall. The reception-room will be in St. George's Hall, and about half of the sections will meet in that building and the immediate neighbourhood; while the remaining sections will be placed in University College. The lecture-theatres and laboratories of the College will be available for demonstrations and for experimental illustration. Of the excursions, the principal one will be to the Isle of Man, from September 24 to 28, when parties under various competent scientific guides will explore the island. In sectional work there are to be ten departments, including physiology, started at Oxford and suspended last year, and botany, started at Ipswich last year. Among the presidents are:—Section A, Mathematical and Physical Science—Professor J. J. Thomson, F.R.S.; Section B, Chemistry—Mr. Ludwig Mond, F.R.S.; Section F, Economic Science and Statistics—the Right Hon. Leonard H. Courtney, M.P.; Section K, Botany—Mr. D. H. Scott, F.R.S. The honorary local secretaries are Messrs. W. A. Herdman, J. C. Thompson, and W. E. Willink, and their office is at 5 Fenwick Street, Liverpool.

A Charge of Kidnapping.

Mr. Roper, a chemist, of Laira, Plymouth, figures in a case of alleged kidnapping, which has been causing some interest in the Plymouth district. The child in question had been adopted about twelve months since by Mr. Cocking, a licensed victualler, of Devonport, the mother (recently married to Mr. Roper) having signed an agreement with Mr. Cocking. On Wednesday of last week, however, whilst the little chap was playing in the street, he was caught up by Mrs. Roper and her husband and conveyed in a cab to their house at Laira. Next day the mother took him to Truro, where Mr. Cocking followed and obtained possession, and brought his adopted son home again. The case is to be brought before a higher Court for settlement, the local Magistrates declining to interfere.

Disinfectants for the Islington Vestry.

The Public Health Committee of the Vestry of Islington have been considering a reference to them as to the substitution of cheaper disinfectants for those now in use, and also as to the manner in which they are distributed to the public; and the decision they have arrived at is: That in future only carbolic acid disinfectants be used; and that the distribution be not, as heretofore, free to all applicants, but only on the production of a ticket signed by the sanitary inspector of the district in which the premises for which they are required are situated, or on production of a ticket to be obtained from the officials of the Public Health Department.

A Dispenser's Divorce.

Mr. William Bishop, a dispenser at King's College Hospital, obtained a divorce from his wife at the High Court on Wednesday. She was a nurse when he married her in 1888. Soon after the marriage she took to drink, and used to throw things at him. They finally separated, and he paid her an allowance. But she proved unfaithful: hence the decree *nisi*.

Smoking-concert.

Under the auspices of the Western Chemists' Association of London a successful concert was given at the Craven Restaurant, Craven Road, W., on Wednesday evening. Mr.

J. C. Hyslop occupied the chair. The attendance at the outset was somewhat thin in point of numbers owing to an event of a like character at the "Square," but as the concert proceeded the attendance increased. A select programme had been arranged, and amongst the performers were Madame Joyce Maas, Messrs. Reynolds, Trueman, &c. Two Kipling poems, recited by Mr. Reynolds, formed a pleasing feature of the programme, while Madame Maas and Mr. Trueman greatly pleased the audience with their solos and duets.

Operations at Hospitals.

On Wednesday, at the St. Pancras Coroner's Court, Dr. G. Danford Thomas held an inquiry into the circumstances attending the death of Geo. Edgar Crowfoot, aged 21, a baker, of 214 York Road, St. Pancras, who died in the Royal Free Hospital on Monday last under an anæsthetic. The deceased, having hurt his finger, went to the Royal Free Hospital on Saturday, April 4, where he had it dressed and was told to come again on the Monday. His father gave evidence that on the Monday morning deceased went, as he thought, to his business, but subsequently it was discovered that he had not been. Witless next went to the Royal Free Hospital, where he found that his son had died while an operation was being performed on him under chloroform. Dr. Francis Bottomley, the house-surgeon, gave evidence. He said when the operation was urged upon him deceased would not at first agree to it, but afterwards he signed the usual paper given him, and the operation was started.

The Coroner: How about his name and address?—We did not ask him. The Coroner: Do you mean to say you made no effort to find out who and what he was?—No, not at the time. The Coroner: Surely this cannot be the usual procedure in this hospital?—No; we usually find out who it is first. The Coroner: Well, can you explain how it is that an unknown man has an operation performed on him which is a case of life and death?—This is really an exceptional case. If we had thought for a moment it might terminate fatally, we should never have performed it unless we had first found out who he was.

Eventually a verdict of accidental death was returned.

Shops (Early closing) Bill.

The consideration of the Standing Committee's report on this Bill, which was set down for Wednesday last, was not reached at the close of business, and when called was "objected" to by several members. It is now set down for Wednesday, June 10. Three petitions against it were presented from London, while others from Nottingham and Hastings in favour of it were presented. Besides the amendments of which notice has already been given, Mr. H. Samuel proposes to introduce a clause to exempt the county of London altogether from its operation, Mr. Bhowaggee wishes to provide that after refusal of an order no similar application shall be entertained for a clear year at least, and Mr. Olroyd proposes to substitute the words "an occupier" for "a pharmaceutical chemist, chemist and druggist, or registered druggist," in clause 9. The London Unionist members held a meeting a few days ago to consider the Bill, and agreed to vigorously resist it unless it should be materially modified on report.



Pharmaceutical Society of Ireland.

Preliminary Examination—The following have passed:—Messrs. (S. Browne and A. Wilson, equal), W. J. Burke, F. B. Angley, M. J. Cogan, J. T. Dwyer, (R. Prior and G. Wilson, equal), R. L. M. Boyd, A. H. Hagan, J. W. Burns, E. A. Reilly,

P. M. Nugent, A. V. Flynn, and S. Hill. Ten candidates were rejected.

Pharmaceutical Licence Examination—The following have passed:—Messrs. J. W. McClean, A. Gibson, R. J. Savage, F. H. R. Brady, J. G. W. Boggs, J. Ritchie, J. Horgan, T. O'Sullivan, and R. Barron. Twelve candidates were rejected.

Examination for Registered Druggist Licence—The following have passed:—Messrs. J. H. Bowden, J. E. Cooper, R. C. Dorman, and R. Hall. One candidate was rejected.

Mr. J. H. Bowden has also passed the Pharmaceutical Assistants' Examination.

An Amateur Pyrotechnist.

At the Cork Assizes, last week, John Collins, who recently lost an eye while witnessing the discharge of rockets by Mr. Richard Carey, chemist, at a local fête, has been awarded 120*l.* damages.

Linseed-cake Meal.

Mr. May, of Belfast, who was recently fined 3*l.* for selling an article adulterated with 30 per cent. of starch as linseed-cake meal, appealed against the decision, and it was argued for him that linseed-cake meal was not linseed-meal, and was not a drug within the meaning of the Act. The Recorder of Belfast (Mr. H. Fitzgibbon, Q.C.), in his judgment, said:—Linseed-meal appeared to be used for two purposes—feeding cattle and for human purposes. So far as it was used for the feeding of cattle the 56 and 57 Vict. protected the purchaser, because it provided that an invoice should be given. No such invoice was given upon the sale of that article; therefore, he must assume that it was not sold for cattle. That it was used by doctors and in hospitals was plain. Being sold in this small quantity, he must assume that it was not sold for cattle. It appeared that the article had been much used in medicine, but that the faculty were giving it up in consequence of its adulteration. That prosecution was with the object of putting an end to that. His Honour confirmed the decision of the Magistrates, with costs.

Impure Linseed-meal.

Professor J. F. W. Hodges, F.I.C., chemist, lectured a few days ago at Belfast on adulterated linseed-cake, linseed-meal, and linseed-flour. Two years ago he foresaw the growth of this dangerous adulteration, and advised Ulster chemists to take steps to put a stop to the practice. Since then he had analysed several hundred samples of linseed and believed adulteration to have largely increased. Pure linseed-cake ought to be made from nothing but clean or screened linseed. Imported linseed always contained dirt or impurities ranging from 3 to 60 per cent. In one sample, to his knowledge, foreign substances to the extent of 70 per cent. were found. Linseed was frequently adulterated before it was landed in England. He had examined cake-meal and flour warranted to have been made from genuine linseed and found them to contain quantities of weed-seeds, varying from 10 to 40 per cent. He spoke of the comparative purity of Russian and American linseed and of the tricks of trade in adulterating the substance with all sorts of rubbish, naming several favourite mixtures. He was informed by respectable merchants that in consequence of the adulteration it was impossible to sell genuine linseed-meal.

Chemists and Vestries.

Mr. William Allen, L.P.S.I., has been elected a vestryman of Trinity parish, Dublin. Mr. Robert White, druggist, Lower Camden Street, Dublin, has been elected warden of the Molyneux Church, Bride Street. Mr. G. D. Beggs, councillor, Pharmaceutical Society, has been elected a vestryman of Dalkey parish, co. Dublin. Mr. Samuel Gordan, chemist, has been elected churchwarden of Sandford parish, co. Dublin. Mr. George H. Grindley, L.P.S.I., has been elected a vestryman of St. Thomas's parish, Dublin. Mr. E. M. Hodgson (of M'Master, Hodgson & Co.), Capel Street, Dublin, has been elected a vestryman of Zion Church, Rathgar.

GLYCERINE-POTENCIES are the latest homœopathic preparations. Glycerine simply takes the place of spirit, which, it is thought, has too great a tendency to evaporate to be consistent with homœopathic accuracy.



The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

The Kinninmont Prize.

Intending candidates are reminded that the competition will take place in May or June. Names should be sent before the end of April to William L. Currie, 223 Byres Road, Dowanhill, Glasgow, from whom all information may be obtained.

Personal.

Mr. Robert Hughes, chemist, in leaving Kirkcaldy for Edinburgh last week, took with him an excellent dressing-case and umbrella, as a memento from co-workers of the good he had done in Whyte's Causeway Baptist Church.

Two well-known Edinburgh pharmacists are retiring from business shortly—viz., Mr. J. B. Stephenson, who is giving up his pharmacy in North Frederick Street, and Mr. J. R. Young, who is retiring from active participation in the management of Messrs. J. F. Macfarlan & Co.'s business. Both gentlemen have been connected with Edinburgh pharmacy for more than half a century, and, as old examiners and active workers for the Pharmaceutical Society, are almost as well known south of the Border as in the north.

Dr. James T. Grant, M.B., B.Sc., a former member of the Edinburgh Chemists' Assistants' and Apprentices' Association, has been appointed Medical Officer of Health for Shanghai, and will leave in the course of next month, by way of Canada, to take up the duties of the appointment. While he was a member of the Association Dr. Grant took the Ainslie Pharmacy Prize, and was also an Association prizeman, and otherwise took an active interest in the work. He afterwards studied medicine at the Edinburgh University, and distinguished himself in various subjects, taking the M.B., C.M. degree with honours, and B.Sc. in Public Health. He continued his studies in bacteriology in King's College, London, and as a pupil of Dr. Roux at the Pasteur Institute, and has thus eminently fitted himself for the work which will fall to him in Shanghai. Recently Dr. Grant has been one of the resident physicians of the North-Western Hospital for Fevers, Haverstock Hill, N.W.

Royal Hospital for Sick Children.

This handsome new hospital, built at Meadowside, Edinburgh, on the site of the Merchant Maiden Hospital, was opened in October last by Princess Beatrice, and is now approaching completion in all its varied and minute details. The institution was originally founded in 1859, but soon the demand upon the hospital became so great that the directors were compelled to face either rebuilding, removing, or acquiring more accommodation. Ultimately the present site was fixed upon—a level piece of ground to the south of the meadows extending to about an acre and three-quarters, with a frontage to Sciennes Road of 384 feet. The block plan of the building proper is in the form of the letter E, the administrative block being in the centre, and five storeys in height, while the wards' wings are three storeys in height, and contain accommodation for 118 beds. The number of children treated within the hospital now amounts to about 700 yearly, and over 8,000 cases are annually treated at the outdoor department. The outdoor and dispensary buildings which are about to be opened are detached from the hospital proper, and are designed in different style. In fitting up the dispensary the governors have had the benefit of the advice of Mr. William Gilmour, F.R.S.E., and the result is an exceedingly compact and handsome pharmacy. The managers of the hospital have made a new departure for Edinburgh in resolving to appoint a woman as dispenser, and are at present considering applications for the position.

April Examinations.

The attendance of Minor candidates (191) before the Board of Examiners in Edinburgh this month has beaten all records, and current reports have it that the slaughter of the innocents has also been excessive.

A Wine licence Refused.

At the annual licensing court for the burgh of Dingwall, Invernessshire, held on Tuesday, Mr. J. M. Frew, chemist, applied for a "medicated-wine" licence. The application, being quite a novelty in this northern burgh, created considerable local interest, and the court was crowded. Mr. Frew, in support of his application, read a communication from an Edinburgh firm of chemists as to the number of chemists in the country holding wine-licences. He contended that it was no argument against the granting of his application that other chemists would apply for a licence. Provost Stewart pointed out that there was no such thing as a "medicated-wine" licence. Other chemists in the town felt no inconvenience for want of such a licence, and therefore they must refuse the application.

French News.

(From our Paris Correspondent.)

FIRE AT A DRUGGIST'S.—A serious fire occurred last Sunday night in M. Désaynard's drug-warehouse, Place du Marché Fontgviève, Clermont Ferrand.

DEATH OF A WELL-KNOWN PHYSICIAN.—The death is announced of Dr. Constantin Paul, in his sixty-third year. During his long career he made the study of diseases of the heart a speciality. Amongst his published works is "Diagnosis and Treatment of Maladies of the Heart," and he was known to pharmacists by having collaborated with Drs. Pidoux and Trouseau in preparing a new edition of the "Traité de Thérapeutique et Matière Médicale." He was a member of the Academy of Medicine and a Knight of the Legion of Honour.

AN ANTI-DIPHTHERIA PRIZE.—Many years ago a M. and Mme. Victor Saint Paul, who had lost a child from an attack of croup, placed a sum of 25,000*fr.* (1,000*l.*) at the disposal of the Paris Academy of Medicine for the purpose of offering this sum to the person, without distinction of profession or nationality, who should succeed in discovering an efficient and sovereign remedy against diphtheria. At its meeting held last Tuesday the Academy of Medicine decided that this prize should be divided between Drs. Roux and Behring for their discoveries in connection with diphtheria. The interest on the capital has hitherto been awarded every two years as a prize for researches on the same subject.

THE CONGRESS OF LEARNED SOCIETIES OF Paris and the provinces was terminated last Saturday afternoon by a meeting at the Sorbonne. The Colonial Minister, M. Guisysse, presided, and distributed a number of decorations. In the section of chemistry papers were read by well-known authors, including one by M. Mosiner, professor at the Clermont School of Medicine, showing how various artificial colouring-matters may be extracted from wine. He has been able to do this by using a cold saturated solution of nitrate of lead, by which he has obtained lakes varying with the different colouring-matters used, but the natural colouring of wine is not altered. These researches apply to vegetable, animal, and coal-tar dyes, but not for those obtained from fuchsine. M. Trubort, professor at the Gap Lycée, showed a small collection of apparatus which he recommended for use by agriculturists for chemical analysis. Complete instructions accompany the apparatus, which render its use very easy. In the section of medicine Dr. Combemale gave his views on the treatment of alcoholism by strychnine, and the Röntgen rays formed the subject of much discussion in the section of photography.

A PHARMACEUTICAL LAWSUIT.—An interesting lawsuit was tried a few days ago in Paris, in which the right of using the title "Goudron de Guyot," the speciality tar-product, was involved. The plaintiffs were MM. Champigny & Co., the present proprietors of the well-known "Maison Frère,"

and the defendant M. Guernier, the actual owner of the Pharmacie Guyot. The evidence showed that in 1863 M. Guyot, pharmacist, established 61 Rue de Seine, Paris, invented a concentrated-tar liqueur known as Goudron Guyot, which met with a certain success. In February, 1869, he sold the pharmacy to a M. Jacquey for the sum of 26,000f. (1,040l.), but reserved to himself the manufacture and sale of the "liqueur Goudron." A few months later M. Guyot sold this speciality to the "Maison Frère" for 500,000f. (20,000l.). The Pharmacie Guyot was afterwards transferred to its present owner, M. Guernier, for 100,000f. (4,000l.). No difficulty arose until 1882, when MM. Champigny & Co. took exception to the use made by M. Guernier of the name Guyot by using it on his labels and circulars, besides representing his own products as being the authentic Guyot specialities. Several lawsuits were the result, and this last one gives the plaintiffs the sole right to use the name in question in connection with the "liqueur de Goudron." The judgment decides that the defendant has no right to use the name of "Guyot" in connection with the sale of his liqueur and capsules made with tar, but he can still retain it as a means of designating his pharmacy. MM. Champigny obtain 20,000f. (800l.) as damages, and they are authorised to advertise the judgment to the extent of 5,000f. (200l.) at M. Guernier's expense. The latter has also to pay all the costs of the case, and will further be liable to a fine of 500f. (20l.) for all "liqueur and capsules de Goudron" sold contrary to the terms of the judgment.

Foreign and Colonial News.

BUSINESS CHANGE.—The wholesale drug-house, Guimaraes, Braja & Co., of Pernambuco, have taken into partnership M. F. Manoel da Silva and M. A. Gonçalves de Abren, both of whom have been at the head of other drug-firms in the same city. The style of the firm remains as before.

CO-OPERATIVE PHARMACY.—We mentioned recently that some Illinois druggists had started the idea of having a central factory for producing specialities, to be handled only by the members of the association or company. The matter has now taken practical shape as a trade venture, and the laboratory will be started soon, Chicago being the headquarters. A similar concern has been started in Madison, Wisconsin, by the retail druggists of the State.

BUSINESS IN THE SANDWICH ISLANDS.—The Hoburn Drug Company, of Honolulu, is pushing business, and claims to have the best-furnished pharmacy in the city and west of San Francisco. The company started four years ago as retailers, and have since added the wholesale. In a recently-issued circular they say that the laws of the place "make it practically impossible for foreign representatives to come to Honolulu for business. Before any samples can be shown a licence is required. The fee is \$500. It is necessary, therefore, that nearly all business be accomplished by correspondence."

PHARMACY IN BARBADOS.—The Board of Examiners appointed under the Druggists Act, 1894, have recently drafted regulations for the examinations, which have received the approval of the Governor. Briefly stated the requirements are:—A "Preliminary Examination" in English (including history and geography), arithmetic, and Latin—candidates must be at least 17 years old. An "Intermediate Examination," to which candidates are admitted after a year's apprenticeship with a registered druggist; the subjects of the examination are elementary chemistry, weights and measures, prescription-reading, dispensing, and recognition of B.P. chemicals and galenicals. A "Final Examination" is open to candidates three years after they have passed the Preliminary, and at least one year after the Intermediate; the subjects of the examination are reading of any prescriptions (which seems to imply that candidates must be able to read, say, French, German, Spanish, and any other prescriptions—but not Chinese, we hope), posology, and recognition of drugs by sight and taste, poisons, and dispensing. Candidates must be 21 years of age. The Board of Examiners will meet twice a year in January and July at the Public Buildings, Barbados. The

Board is composed of medical men and registered druggists, of whom Mr. W. Julian Knight is one.

MEDICAL PRACTICE IN JAMAICA.—The Legislative Assembly of Jamaica have been considering an amendment Bill relating to the medical laws passed in 1872 and 1885. The Bill was read for the second time on March 11, when it was taken into Committee. Section 8 affected the interests of druggists, in so far as it originally stated that any person licensed as a druggist shall be liable to punishment for illegally practising medicine. According to Dr. C. B. Mosse (superintending medical officer), who introduced the Bill, licensed druggists at present, instead of confining themselves to their legitimate calling, frequently close their drug-stores and traverse the country practising as though they were fully and duly qualified. It was, however, agreed to make the section read "any person not possessing a medical or surgical qualification, but who shall nevertheless practice medicine or surgery, . . . shall be imprisoned with or without hard labour." Mr. Dixon moved an amendment to the effect that the Court should ascertain in the first instance whether relief could have been had from a medical officer at hand, and this amendment was agreed to, as was also one submitted by Dr. Pringle protecting the rights of homœopaths. His amendment stated that the section should not apply to the practice of homœopathy by any duly qualified homœopathic or electro-homœopathic practitioner. The Bill has since become law, and there is satisfaction that the official medical officers have not had it all their own way in the attack upon druggists, who were strongly defended by some of the members.

PHARMACY EXAMINATIONS IN TRINIDAD.—A subscriber at Port of Spain (Trinidad) sends us a copy of the revised by-laws of the Medical Board of Trinidad which were approved by the Governor of the island, and came into force on January 2, 1896. The regulations provide that, before registration, a medical practitioner or dentist shall pay a licence-fee of 5l., a druggist one of 2l., an assistant-druggist or midwife 1l. The by-laws further lay down a scale of charges for medical attendance which they declare "fair and reasonable," but which apparently they cannot enforce. A scale of midwives' fees, which is also published, is, however, made compulsory. "Licensed shopkeepers" (the licence costs 20s.) are permitted to sell the following drugs:—Calomel in packets up to 10 gr. with doses affixed, castor oil, Epsom salts, quinine, senna, cream of tartar, camphor, ipecacuanha, tincture and syrup of squills, sal volatile, compound tincture of lavender, friar's balsam, seidlitz-powder, manna, rhubarb, compound jalap-powder, Peruvian bark, magnesia (lump), laudanum (with doses affixed), pargoric, and santolin. The order further provides for the examination of "druggists," and "assistant-druggists." These examinations, which must be passed before a licence can be obtained, are to be held quarterly, by four examiners to be appointed by the Medical Board. Three of the examiners are to be medical men and will receive a fee of 1l. a day; the fourth is to be a druggist, "to assist at the examinations at a fee not exceeding 1l. for every candidate examined." Candidates for the assistant-druggists' licence must have completed their eighteenth year, produce certificates of good character and of "sufficient primary education, including Latin"; they must have attended a three months' course of chemistry lectures and served three years' apprenticeship to a druggist or in the dispensary of a hospital; and must have successfully passed an examination in practical pharmacy before a druggist appointed by the Council. The examination-fee is 2l., and the examination is to be both oral and in writing, in the following subjects:—Chemistry, practical pharmacy and materia medica, including all drugs in the B.P. There is a clause which provides that if any candidate has attained the age of 19½ years and has passed a very creditable examination, he may be permitted to present himself for the examination of "druggist" after a term of two years, but otherwise he must have been engaged in pharmaceutical work for six years before he is allowed to be examined as a druggist. The examination for this diploma is conducted on the same lines, "but to a fuller extent" than that for the assistants' diploma, but it also includes a knowledge of non-official medicines in general use and of the metric system. The "Official Gazette" of the island publishes a list of twenty-nine druggists entitled to exercise their craft in the island by virtue of the Druggists Act of 1894.

The Winter Session.

SOCIETY OF CHEMICAL INDUSTRY.

LONDON SECTION.

A SMALLER number of members than usual attended the meeting on Monday evening, not more than forty being present, and when Mr. B. E. R. Newlands, the Chairman, happened to mention later on in the evening that the postponement of the meeting called for April 1 meant that the Secretary had to sit up all night writing between 700 and 800 cards to metropolitan members, the disparity between the numbers who attend the meetings and those who might but don't was brought out in strong relief. The average member of a Society such as this is chiefly notable for his inaction. On Monday evening five

MEMBERS OF THE LOCAL COMMITTEE

had to be elected in place of as many who retired, and it almost seemed to surprise the meeting that the chance of nominating members had passed, no one having taken any notice of the invitations to nominate; so the committee itself submitted the names of Messrs. W. J. Dibdin, R. J. Friswell, David Howard, Boverton Redwood and T. Tyrer. Also that Dr. Rudolph Messel, of Silvertown, should succeed Mr. Newlands in the chair, whereupon there was cheering. The committee would be all the better for a pharmacist upon it, and next year the pharmaceutical members ought to bear the matter in mind. The technical papers of the evening cannot be said to be of much pharmaceutical importance, and might, therefore, be dismissed without another sentence; but seldom does the Section receive a communication so eloquent of the reason for the Society's existence as Mr. R. W. SINDALL'S on the

ESTIMATION OF MOISTURE IN WOOD-PULP

—a paper of too high value and commercial importance to dismiss without remark. Mr. Sindall is a chemist at the *Daily Chronicle* paper-mills, where immense quantities of wood-pulp are consumed in producing that organ of light and leading in matters Radical. Wood-pulp is made by three methods—viz., (1) mechanical, (2) soda, and (3) sulphite—and there are certain slight differences between them, especially in hygroscopicity. The pulp is sold by the makers on the basis of 12 per cent. moisture in the air-dried material, but there have been for a long time disputes between sellers and buyers as to what this means, and how the samples should be taken. To these points Mr. Sindall addressed himself, and gave the meeting the results of two or three years' observations on all the wood-pulp bought by the *Daily Chronicle* in that time. The supplies received each month of the year were therefore dealt with, so that all possible atmospheric conditions were included, which means that the humidity of the atmosphere varied from 30 to 95, with a certain variation in the amount of the moisture in the pulp. Taking 83 as the mean humidity of the air, Mr. Sindall finds that 88 parts of absolutely dry pulp (i.e., 100 parts containing 12 per cent. of moisture) are represented in 103.17 parts of mechanical pulp, 99.42 parts of soda pulp, and 100.6 parts of sulphite pulp; the variation, in fact, is such that a buyer may on an ordinary purchase sometimes have to pay pulp price for 8 tons of water. Mr. Sindall showed that it is possible to work out a geometrical rule for calculating the moisture, and he gave full details as to the manner of sampling; but in regard to these matters reference should be made to the paper when published.

During the discussion, Mr. DAVID HOWARD remarked that air-dried cinchona bark contains as near as possible 12 per cent. of moisture. Several speakers mentioned that cotton-fibre contains 8.3 per cent. of moisture, but when it is made absorbent it practically becomes like wood-pulp—a point which buyers of absorbent wool and antiseptic dressings by weight should keep in mind.

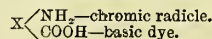
Mr. WATSON SMITH continued his

STUDIES ON SALTS OF AMMONIA,

dealing in the present communication with the action of syrupy phosphoric acid on ammonium chloride. Broadly speaking, the result of his experiments shows that about

90 per cent. of the chlorine of ammonium chloride is liberated as hydrochloric acid by the action of heat, and a fair percentage of the ammonia comes off in the free state; but there is considerable corrosion of vessels, about which Mr. Smith was, however, optimistic, hoping that the chemical engineer would yet make the phosphoric process of producing hydrochloric acid from ammoniac-soda residues a possibility. Dr. MESSEL rather damped the hope by stating that he had tried the process years ago on the manufacturing scale, and could get no apparatus to stand the corrosive action of phosphoric acid.

Mr. Smith next submitted some results of experiments with wool and ammonium sulphate. In wool there is a peculiar acid containing amido (NH_2) and carboxylic (COOH) groups, the presence of which is of great importance in dyeing with certain colours, as the dye fixes itself to the amido or carboxylic group, according as it is acid or basic. When potassium bichromate is used as a mordant, the chromic radicle enters the wool, leaving the bath a solution of neutral chromate, and it is supposed that the chromic radicle adheres to the amido group of the wool-acid. So mordanted, the wool will take on a basic dye, which adheres to the carboxylic group, but not an acid one. The condition may be represented thus:—



When an acid dye is to be used after the chrome mordant it is necessary to add cream of tartar to the mordant bath, and this has the effect of changing the chromic radicle to chromium hydroxide, and shifts it down to the carboxylic group. Thinking over this, Mr. Smith wondered if wool would show basic properties to ammonium sulphate, and on boiling pure wool with different quantities of the sulphate, and making all allowance for secondary reactions, he obtained from 1.5 to 9.3 per cent. of the ammonia in the free state, this being due to the greediness of the NH_2 for acid. Indeed, so marked is this property that if wool is steeped in dilute sulphuric acid, it takes a very long time to wash out the acid, so tenacious is the NH_2 towards acid. Incidentally, Mr. Smith remarked upon the greater suitability of ammonia and ammonia soaps for washing wool, as they do not disturb the amido group, while fixed alkalis destroy it.

This was all the business of importance.

MANCHESTER SECTION.

At the annual meeting, held at the Chemical Club, Victoria Hotel, on April 10, Mr. G. E. DAVIES, Chairman of the Section, stated that the local committee had decided to invite the Society to hold the 1897 meeting in Manchester.

Mr. R. le Neve Foster, Dr. Gerland, Dr. Grossmann, Dr. Lewkowsitch, and Dr. Watson were elected members of the sectional Council.

Mr. R. J. FLINTOFF, in a paper on the functions of albumen as a fixing-agent for pigments on cotton, stated that they were twofold—viz., the well-known one of "occlusion," and the other that of increasing the opacity of the layer of colour, and at the same time increasing its reflecting-power, thereby apparently increasing the colour of the body. The second of these two functions he named "intensification." It is not, he added, confined to albumen, but is possessed by many substances capable of holding pigments in a homogeneous state in suspension, and also of forming a suitable medium for their even distribution over the surface of the cotton fabric.

Mr. PETER HART described an apparatus for economising the waste steam from the air-pumps in chemical-works, and Mr. J. BARNES submitted a short paper on "The Preparation of Water free from Ammonia."

BRIGHTON JUNIOR ASSOCIATION OF PHARMACY.

On Wednesday, April 8, the general meeting was held, Mr. T. F. Grindley (President) in the chair. The decision was given regarding the best two essays on the "History of Dispensing," for which prizes were offered: (1) a guinea's worth of books, by Mr. W. H. Gibson; (2) Cripps's "Galenical Pharmacy," by the author. Mr. A. H. Price was awarded first, Mr. A. H. Cupit second. Mr. C. S. Ashton acted as adjudicator. The officers elected for the ensuing

session are: Mr. A. T. Jeeves, President; Mr. G. B. Savage, Vice-President; Mr. C. A. Blamey, Hon. Secretary; Mr. A. H. Cupitt, Hon. Treasurer. Committee, Messrs. Yates, Beckwith, Davies, Armour, Kent, and Biffin. The members of the Association recently presented a handsome smoking-cabinet to Mr. A. E. Colman, an ex-President and Secretary, in recognition of the long and valuable services which he has rendered the Association.

MIDLAND CHEMISTS' ASSISTANTS' ASSOCIATION.

ON Wednesday, April 8, at Exchange Rooms, Birmingham, the President in the chair, and before a good attendance, Mr. F. H. ALCOCK, F.I.C., &c, read a paper on "Volumetric Analysis," dealing particularly with the B.P. test-solutions. The paper was illustrated with experiments.

CAMBRIDGE PHARMACEUTICAL ASSOCIATION.

At the meeting of this Society on April 10, Mr. E. SAVILLE PECK gave an account of a "Holiday Ramble in Switzerland." Mr. Alderman Deck, F.C.S., occupied the chair, and a good attendance of members was recorded. The lecture was illustrated by means of limelight views, reproduced from photographs mostly taken during the trip.

Pharmaceutical Society of Great Britain.

"FIRST" EXAMINATION.

THE following are the questions given at the examination held on Tuesday this week:—

LATIN.

(Time allowed—from 11 A.M. to 12.30 P.M.)

I. For all candidates. Translate into Latin:—

1. The soldiers were fighting very bravely.
2. Both the daughter and the sister will be praised by the queen.
3. We cannot defend ourselves and our property from them.
4. What business have you here?
5. The book which we are reading has not yet been sold.

II. Translate into English either A (Caesar) or B (Virgil).

(Candidates must not attempt both authors.)

A. CAESAR.

1. Cognito Caesaris adventu, Ariovistus legatos ad eum mittit: Quod antea de colloquio postulasset, id per se fieri licere, quoniam propius accessisset; seque id sine periculo facere posse existimare. Non respuat conditionem Caesar, jamque eum ad sanitatem reverti arbitrabatur, quum id, quod antea petenti denegasset, ultro polliceretur; magnamque in spem veni-bat, pro suis tantis populiue Romani in eum beneficiis, cognitis suis postulatis, fore uti pertinacia desisteret.

2. Hoc proelio trans Rhenum nuntiato, Suevi, qui ad ripas Rheni venerant, domum reverti coeperunt; quos Ubi, qui proximi Rhenum incolunt, perterritos insecuti, magnum ex his numerum occiderunt. Caesar, una aestate duobus maximis bellis confectis, maturius paulo, quam tempus anni postulabat, in hiberna in Sequanos exercitum deduxit: hibernis Labienum praeposuit; ipse in citeriorem Galliam ad conventus agendos profectus est.

Grammatical Questions.

(For those only who take Caesar.)

1. Give the gender and the genitive case singular of all the substantives in Paragraph 1.
2. Give the third person singular of the subjunctive present and pluperfect, and the present participle, of all the verbs in Paragraph 2.
3. Parse fully:—*Ipsae in citeriorem Galliam ad conventus agendos profectus est.* (Paragraph 2)
4. How do you express in Latin (i.) *purpose*, (ii.) *value*?

B. VIRGIL.

1. Lucus in urbe fuit melius, laetissimus umbrae;
Quo primum iocati undis et turbine Poeni
Effodere loco signum, quod regi Juno
Monstrarat, caput a tris equi: sic nam fore bello
Egrediam, et faciem victu per secula gentem.
Hic templum Junoni ingens Sidonia Diis
Condebat, donis opulentum et numine Divae;
Aerea cui gradibus surgebant limina, nexaeque
Aere trabes, foribus cardo stridebat aenis.

2. "Quassatam ventis liceat subducere classem,
Et silvis aptare trabes, et stringere remos.
Si datur Italiam, sociis et rege recepto,
Tendere, ut Italiam laeti Latiumque petamus:
Sin assumpta salus, et te pater optime Teucrum,
Pontus habet Libyae, nec spes jam restat Iuli;
At freta Sicaniae saltem sedesque paratas,
Unde huc advecti, regemque petamus Aestem."

Grammatical Questions.

(For those only who take Virgil.)

1. Give the gender and the genitive case singular of all the substantives in Passage 2.
2. Give the third person singular of the subjunctive present and pluperfect, and the present participle, of all the verbs in Passage 1.
3. Parse fully:—*Lucus in urbe fuit melius, laetissimus umbrae.* (Passage 1.)
4. How do you express in Latin (i.) *purpose*, (ii.) *value*?

ARITHMETIC.

(Time allowed—from 12.30 P.M. to 2 P.M.)

(The working of these questions, as well as the answers, must be written out in full.)

1. Find the value of a gold vase weighing 740 oz. 12 dwt. 12 gr., at 4*l.* 4*s.* 6*d.* per oz.

2. After walking $4\frac{1}{2}$ miles, a man has accomplished

$$\frac{2\frac{1}{2} - 1\frac{1}{2} \text{ of } 2\frac{1}{2} + \frac{1}{2}}{(2\frac{1}{2} - 1\frac{1}{2}) \text{ of } (2\frac{1}{2} + 1\frac{1}{2})} \text{ of } \frac{\frac{2}{3} + \frac{1}{3}}{\frac{2}{3} - \frac{1}{3}}$$

of his journey. How many miles has he still to walk?

3. If 4 oz. of tea cost 562*s.*, what is the value of 15625 cwt.?
4. If 12 men can dig a trench 40 yds. long and 4 ft. wide in 10 days of 8 hours each, how many hours a day must 55 men work in order to dig a trench of the same depth, 220 yds. long and 5 ft. wide, in 18 days?
5. Find the difference between

216*l.* + 43 of a shilling and 216*l.* + 43 of a shilling.

6. By selling goods for 225*l.* 10*s.*, I gain 12% per cent. What shall I gain or lose per cent. by selling the same goods for 187*l.* 10*s.*?

The following question must be attempted by every candidate:—

7. A bath contained 455 hectolitres; then a tap was turned on which let 32 litres per minute run into the bath. How many gallons (approximate) were in it at the end of two hours and a half?

ENGLISH.

(Time allowed—from 3 P.M. to 4.30 P.M.)

1. State the grammatical difference between (i.) *rise* and *raise*, (ii.) *lie* and *lay*, and illustrate their use by examples. Give the past tense (3rd person singular) and perfect participle of these four verbs.

2. Parse fully:—"Let merry England proudly rear her blended roses."

3. Analyse:—"He inferred from this that the opinion of the judge was that the prisoner was guilty."

4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where necessary:—In January Miss Alford took that step her period of postulancy was an unusually short one and she has told us herself how that came to be asked her during the three months had you been considering the duties you were to take upon yourself and she said yes I asked why she was admitted so soon and her answer was partly because I wished it then I asked what reason did you give for wishing to be admitted so soon and her reply was I was infatuated with the work.

The following question must be attempted by every candidate:—

5. Write a short composition on one of the following subjects:—

- (i.) Life in the country.
- (ii.) Thrift.
- (iii.) Arbitration in international disputes.
- (iv.) "Absence of occupation is not rest,
A mind quite vacant is a mind distressed."

THE ADOPTION OF THE METRIC SYSTEM by the United States seems to have received a notable impulse during the past month by the action of the Committee of Congress, which has reported in favour of its use by the United States Government in all its affairs except the completion of land surveys now in progress, on and after July 1, 1898, and its general use throughout the country on the first day of the twentieth century, January 1, 1901. The report is the outcome of a movement very early in this Session of Congress.

Trade-Marks Applied for.

ANY person who has good grounds of objection to the registration of any of the following marks should at once communicate with Sir Reader Lusk, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(From the "Trade Marks Journal," April 1, 1896)

"NERVANBONE OIL," and jungle device; for a medicinal oil for human use. By J. Degnan, 209 Oxford Street, Sydney, N.S.W., aerated-water bottler. 192,128. The essential particular is the device.

"CAMEO"; for medicated papers for human use. By the British Patent Perforated Paper Company, 92 Banner Street, Golden Lane, E.C., manufacturers. 193,277.

"DUREXA" and "ROBEX"; for chemical substances prepared for use in medicine and pharmacy. By F. W. Fletcher, Beauchamp Lodge, Enfield, manufacturing chemist. 193,383, 193,563.

"ADUINE," and wording on oblong label; for a hair-restorer. By C. F. Edwards, 2 Sefton Street, Putney, London, fishmonger. 191,091. The essential particular is the word "Aduine."

"KORINE"; for perfumery, soap, &c. By W. Mottram, 95 Fleet Street, London, commission agent. 193,707.

Device of syphon discharging carbonic acid; for liquid carbonic-acid gas for making mineral waters, &c. By Uhlmann & Keutgen, 27 Leadenhall Street, E.C. 193,723. The essential particular is the device.

(From the "Trade Marks Journal," April 8, 1896.)

Representation of applicants' works, and wording, "Sarsaparilla Health Salt," &c., on label; for a medicinal preparation for human use. By Woods & Goodier, Kay Street Mills, Preston, Lancs., wholesale druggists. 192,541. The essential particular is the device.

Device of dog biting man's leg; for a remedy for hydrophobia. By J. K. Paine, "The Firs," Caxton, Cambs., farmer. 192,705.

"PRUMBOBLAC"; for a medicated lotion for human use. By G. E. Couldery, 165 High Street, Lewisham, S.E., chemist and druggist. 193,516.

Device of human ear, and wording; for a medicinal preparation for human use. By the Mackay Remedy Company, 104 High Holborn, London, ear specialists. 193,701. The essential particular is the device.

Figure of Justice, and wording, "Dr. White's Sanitary Towels"; for sanitary towels. By A. Berliner, 13 Worship Street, London, manufacturer. 192,463. The essential particular is the device.

"GODA," "ELYSIUM"; for soap. By Watson & Dewhirst, Deanroyd Mills, Walsden, Todmorden, manufacturing chemists. 193 062-3.

"ULOTA"; for perfumery and toilet-preparations. By Rouse Brothers, 61 Charlotte Street, Tottenham Court Road, London, W., manufacturing druggists. 193,685.

"CHARLÉSANTE"; for perfumery, soap, and preparations for the teeth, hair, &c. By De Neuville & Co., 13 High Street, Woking, perfumers. 192,154.

"BRAHMINEN TINKTUR," and figure of Brahmin; for a medicinal preparation for human use. By O. E. F. Venzke, Gutzkowstrasse 26, Dresden, manufacturer. 192,520. The essential particular is the device.

"KALOPODOS," applicant's signature, and device of sheaf of wheat; for a preparation for the cure of corns. By E. Stanley, 24 Tivoli Place, Cheltenham, gentleman. 192,142. The essential particular is the device and signature.

Device of label, with applicants' name and address, trade-mark, and the word "Syringes"; for druggists' sundries, surgical instruments, &c. By May, Roberts & Co., 9 and 11 Clerkenwell Road, London, E.C., druggists' sundrymen. 193,198.

(From the "Trade Marks Journal," April 15, 1896.)

"JEYES' DISINFECTANTS," and device of nurse washing her hands; for disinfectants. By the Jeyes' Sanitary Compounds Company (Limited), 43 Cannon Street, London, E.C. 186,844. The essential particular is the device.

"HERMINE"; for an ointment for human use. By A. E. McCracken, 3 Mellifont Avenue, Kingstown, co. Dublin. 193,687.

"GOLD FLOSS," and facsimile of applicant's signature; for aerated and mineral waters. By the Birmingham Syphon Company, 163 Bishop Street, Birmingham. 192,868. The essential particular is the applicant's signature.

"VIVAXIVATO"; for an aerated beverage. By W. E. Line & Co., St. John's Hill, Reading, mineral water manufacturers. 193,861.

"CAMADEVA"; for perfumery, toilet-articles, and perfumed soaps. By H. Smith, 14 Jane Street, Workington, chemist. 193,569.

"LIBIL"; for perfumery, soap, and toilet-preparations. By Blondeau et Cie., Malden Crescent, London, N.W. 193,907.

Trade Notes.

MESSRS. JOHN MOSS & Co., Wilson Street, New Cross Road, S.E., ask us to say that they still make Dr. Dobell's Aperient referred to last week.

MESSRS. J. RAPHAEL & Co., manufacturing opticians, of 13 Oxford Street, have sent a representative with a sample of their spectacles, &c., to the West Indies and South America.

THE arms of Gloucester provided in the advertisement of Messrs. Barclay & Sons (Limited) this week are intended to make vaccination-shields gregarious—if we may judge from what the writer says.

MESSRS. BURROUGHS, WELLCOME & Co. have some spare copies of their chemist's vest-pocket diary for 1896 which they will send to apprentices or assistants of chemists who will apply to them on postcards, naming the pharmacists with whom they are living.

MESSRS. JOHN RICHARDSON & Co. (LIMITED), Leicester, write in reference to a note published last week concerning Messrs. Burroughs, Wellcome & Co.'s "latest" tabloid—one containing 5 gr. of cerium oxalate. The Leicester firm state that they have made and listed this particular tablet for at least five years past.

SCHERING'S diphtheria-antitoxin, prepared by the Chemische Fabrik auf Actien (vorm. E. Schering) in Berlin, and sold in this country by Messrs. A. M. Zimmermann, of St. Mary-at-Hill, is now brought into trade in three different strengths, respectively called "A," a solution of 100 antitoxin units per 1 c.c. (white label); "B," 200 units per 1 c.c. (blue label); and "high-testing" (red-label), containing 500 units per 1 c.c.

A FEW weeks ago we mentioned Messrs. Charles Wright & Co.'s myrrh tooth-soap in this column. We now learn that Mr. George Yaxley, of Merton, Surrey, has been appointed sole agent for the United Kingdom, and can supply wholesale buyers, as he carries ample stock. Retailers will obtain the speciality through the wholesale houses. Wright's "Paragon" headache remedies are also introduced into this country for the first time through Mr. Yaxley.

SOUTH AMERICAN PHARMACY.—They seem to be a trifle peculiar about pharmaceutical matters in some South American States. For example, in Brazil a foreigner must pass a strict examination in the Portuguese language, but the native gets the advantage of him by receiving the questions two weeks in advance of the examination, while the foreigner is required to answer offhand. In Chili the pharmaceutical examinations are very simple, and the foreigner is favoured in many ways.

Legal Reports.

THE YORKSHIRE RELISH CASE.

FURTHER PROCEEDINGS.

In the Chancery Division of the High Court on Tuesday, before Mr. Justice Stirling, Mr. Graham Hastings, Q.C., brought on a motion in an action *Powell v. The Birmingham Vinegar Brewery Company (Limited)*. He said that the motion was one to sequestrate the defendant company and commit its manager for breach of an interlocutory injunction. The notice of motion was given in September, 1894, but it stood over until after the hearing of the other action in this court for injunction to restrain the defendants from infringing the plaintiff's label for Yorkshire Relish. It was then agreed that it should stand over till after the hearing of the appeal. That appeal had now been disposed of, and he now desired to bring on the motion. Mr. Waggett, for the defendant company, asked that the motion might stand over for a week. Mr. Hastings objected, saying the other side had had ample time given them already; but if they would undertake not to dispose of a single bottle bearing the label known as No. 2, which they had attempted to say was not an infringement of the order of the Court, he would assent to the adjournment. There was no question, he added, that it was the bottle which the Court of Appeal had decided to be an infringement. Mr. Waggett gave the undertaking asked for, and accordingly the hearing of the motion was adjourned until Friday week.

COUNTY COURT CASES.

WAITING FOR THE SEASON.

At the Douglas High Court on April 6, Kay, John & Co. applied to have A. E. Woodward sent to prison for failing to pay a debt of over 21*l.* for which execution was granted on October 25, 1895. The defendant said he was a dentist and chemist, and some time ago carried on business at Broadway. He failed, and since then had started and failed in business as a dentist and chemist in Regent Street. It was here that the debt now sued for was contracted. He was now trying to carry on business as a chemist at his father's house on the Crescent, and was earning between 15*s.* and 1*l.* a week. It cost him 15*s.* a week to live; he had also 5*s.* a week to pay under an order granted to another creditor. The applicant's solicitor insinuated that the debtor could find money for betting, but the defendant swore he never betted, nor did he carry on a commission agency for betting. His Honour: I suppose when the season comes you expect a great improvement in your returns? Defendant: Yes, sir. An order of imprisonment was stayed for two months.

SALE OF FOOD AND DRUGS ACT.

SPIRIT OF NITROUS ETHER.

A SHEERNESS chemist, whose name, William George Saffrey, we do not find on the register, had to defend an action brought against him at the Sittingbourne Petty Sessions last week, in respect to spirit of nitrous ether, which he had sold, and which happened to be deficient in nitrous ether to the extent of 44 per cent. Mr. Saffrey was ordered to pay 1*l.*, this including costs.

AN IODINE MIXTURE.

At the Clerkenwell Police Court, on March 25, Mr. J. C. Meacher, chemist, 61 Stroud Green Road, Finsbury Park, was summoned by William Walter Ward, a sanitary inspector for Islington, for that on February 24 he sold a compound of iodine, iodide of potassium, and water, which was not in accordance with the demand of the purchaser—to wit, iodine 66 gr., iodide of potassium 99 gr., and water to 3 oz.—the said compound drug showing a deficiency of 14.8 per cent. of the required iodine, and an excess of 9.3 per cent. of iodide of potassium.

The defendant disputed the analyst's result, and, in reply to the Magistrate (Mr. Bros), said he would pay the fee of 10*s.* 6*d.* to have the third portion of the sample sent to

Somerset House. The case was therefore adjourned for three weeks.

On April 15, at the Clerkenwell Police Court, it was reported that the Somerset House analysis had been received by the Clerk of the Court. It was signed by R. Bannister, F.I.C., and G. Lewin, F.I.C., who certified that they had analysed the drug, and found it to contain a solution of iodine and iodide of potassium, with a few crystals of undissolved iodine. The proportion of iodine in solution was equal to 92.4 gr. in 3 fl. oz., and of iodide of potassium 103.8 gr. The analysts stated that, judging from the condition of the sample when received, they were of opinion that the iodine was not fully dissolved when the division took place, and that therefore the three parts were not identical in composition.

On this certificate the Magistrate dismissed the summons, and ordered that the 10*s.* 6*d.* paid by the defendant for the Somerset House analysis should be repaid to him.

Bankruptcy Report.

Re ARTHUR J. CONROY, 131 Christchurch Road, and residing at Hawkwood Road, Boscombe, Chemist and Druggist.

A MEETING of creditors of this debtor was held at Salisbury on April 8 before Mr. F. Aston Dawes. The statement of affairs showed liabilities 1,571*l.* 16*s.* 8*d.*, of which 1,069*l.* 6*s.* 3*d.* is expected to rank for dividend. The assets are estimated to realise 28*l.* 17*s.* 3*d.*, and from this sum has to be deducted preferential claims amounting to 2*l.* 10*s.* 5*d.*, leaving a deficiency of 1,040*l.* 8*s.* 11½*d.* A summary order has been obtained, and the estate will be wound up in the usual way by the Official Receiver.

Gazette.

PARTNERSHIPS DISSOLVED.

Bower, E., Bower, T. E., and Bower, C. L., indigo merchants and dealers, Fenchurch Street, E.C., under the style of Edward Bower & Co.; so far as regards T. E. Bower.

Carter, G., and Bampton, A. H., medical practitioners, under the style of Carter & Bampton, Ikley.

Cleaver, F. J., and Cleaver, W. A., wholesale perfumers and fancy-soap manufacturers, Red Lion Street, Holborn, W.C., under the style of F. S. Cleaver & Sons.

Ross, F., and Walgate, S., homoeopathic chemists, Vere Street, Oxford Street, W., under the style of Leath & Ross.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Barron, William, the younger, Cheltenham, chemist and druggist.

ADJUDICATION.

Pridham, William Frederick, Earl's Court Road, S.W., physician and surgeon.

New Companies and Company News.

MELBOURNE EXTRACT COMPANY (LIMITED).—Capital 10,000*l.*, in 10*l.* shares. Objects: To acquire and take over the business of manufacturers and purveyors of Liebig's extract of meat, of 54 and 58 Stanley Street, Liverpool, and to carry on the business of manufacturers of and dealers in extracts of meat, medicated wines, fluid-beef, extract of malt, &c. The first directors are:—James S. Duerden, grocer, of Aqueduct Street, Burnley; George T. Duerden, meat salesman, of 1 Colne Road, Brierfield; and James Smith, J.P., of Carleton House, Brierfield.

BRIDGWATERS (LIMITED).—Capital 500*l.*, in 1*l.* shares. Objects: To purchase or otherwise acquire the business

lately carried on by Edmund L. W. Bridgwater, at 96 Hill Top, West Bromwich, Staffs, to carry on the business of chemists, druggists, and tobaccoists, and to buy, sell, and deal in drugs, proprietary articles, patent medicines, and chemicals of all kinds. The first subscribers (each with one share) are:—Wm. Glover, Ettingshall House, Wood Green, Wexnesbury, chemist; Felix Goodwin, pharmaceutical chemist, Arthur B. Slack, drug-merchant, Mrs. Mabel M. Slack, all of 96 Hill Top, West Bromwich; Alfred Lloyd, Hill Top, West Bromwich, corn-factor; Wm. Hadderton, 290 High Street, West Bromwich, architect; and David Harford, 33 Carter's Green, West Bromwich, valuer. Registered without articles of association.

TERROR COMPANY (LIMITED).—Capital 20,000*l.*, in 1*l.* shares. Objects: To purchase or otherwise acquire, take over as a going concern, and carry on the business of vendors of "terror," now being carried on by Bertie-Smith & Co. as "The Terror Company," at 30, 32, and 34 Devonshire Road, Forest Hill, London, S.E., and to enter into an agreement with Llewellyn G. Estes, Jenny Eastwood, and Albert E. Bertie-Smith for the purpose. The first directors are:—Arthur Hooley, M.R.C.S., of Cobham, Surrey; A. E. Bertie-Smith, wholesale druggist, of Holme Lodge, Waldenshaw Road, Forest Hill, S.E.; and Erasmus Beynon, chemist, of 34 Devonshire Road, Forest Hill, S.E. Qualification, 100*l.* Remuneration, one guinea each per board meeting attended and a share in the profits.

MACSYMON'S STORES (LIMITED).—Capital, 100,000*l.*, in 5*l.* shares (of which 10,000 are 5*l.* per cent. cumulative preference). Objects: To enter into an agreement with Robert MacSymon and John MacSymon, on behalf of MacSymon & Co (Limited), and to carry on the business of wholesale and retail grocers, provision-dealers, tea, coffee, and spice merchants, import and export produce merchants, ship-store dealers, Italian warehousemen, seed-merchants, oilmen, wholesale and retail chemists and druggists, vendors of patent medicines and druggists' sundries, &c. The first directors are:—Robert MacSymon, John Tainsh, Robert Buchanan, and Archibald B. McKellar. Qualification, 50 shares. Remuneration, not more than 1,000*l.* per annum, divisible. Robert MacSymon is to act as managing director, with 500*l.* per annum.

NO DIVIDEND.—The annual report of the directors of Sharland & Co. (Limited), of Auckland, New Zealand, states that after providing for the loss of 502*l.* 17*s.*, shown in the preceding balance-sheet, and writing off a sum for depreciation of plant and fixtures, there remained the sum of 1,693*l.* 8*s.* 6*d.*, of which the directors recommended that 1,000*l.* should be written off patent and proprietary rights, and the balance carried forward. The position of the company will thereby be considerably strengthened, and a dividend may reasonably be anticipated next year and thenceforward. Attention was called to a large saving which had been effected in "salaries, interest and discount, rents, rates, taxes, and general expenses." In previous balance-sheets this item stood at 15,088*l.* 13*s.* 3*d.*; this year it is only 12,029*l.* 1*s.* 4*d.*

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section, free of charge, if properly authenticated.

MR A E KENNERLEY has sold his business at 323 Park Road, Liverpool, to Mr. George Jeanes.

THE business of the late Mr. Orlando Packman, truss and instrument manufacturer, King Street, Maidstone, has been transferred to Mr. J. B. Paterson, who has managed it for five years.

THE business of William Davidson, wholesale merchant and druggist, 54 Castle Street, Aberdeen, which since his death has been carried on by his wife, has been transferred to Alex. Coutts Brimer, who has been connected with the business for some years past.

THE partnership of Glass & Innes, chemists and druggists, 48 Clerk Street, Edinburgh, has been dissolved as at April 17. Mr. George Innes will carry on business in the premises presently occupied by the firm, and Mr. Wm. Stephen Glass has acquired premises at 193 Morningside Road, Edinburgh.

Personalities.

MR. CHARLES GERRING, chemist and druggist, Market Place, Witney, Oxon, has been elected a member of the Urban District Council.

MR. W. KINGSTON TOMKINS, chemist and druggist, of Buckley, Chester, has been reappointed vicar's warden for the parish of St. Matthew's, Buckley, for the ensuing year.

DR. EDWARD SCHUNCK, F.R.S., of Manchester, is to be the next president of the Society of Chemical Industry—that is to say, he will preside at the 1897 annual meeting, which will be held in Manchester.

MR. FREDERICK HURLSTONE, who was murdered in his store at Redington, Matabeleland, by the native rebels, was until two years ago connected with the establishment of the late Mr. Ferneley, chemist and druggist, Worcester.

LAST week, at the Royal (Stopford) Hotel, the Deputies of the Jersey States Assembly dined together to signalise the close of the 1896 session. The guest of the evening was Dr. W. Duret-Anbin (Deputy of St. Helier), author of the local Pharmacy Act, which is expected to come on for discussion early next year.

Marriages.

CLEMENT—GASS.—On April 4, at SS. Philip and James, Oxford, by the Rev. W. Brown, M.A., H. E. Clement, chemist and druggist, Hampton Hill, Middlesex, to Jane E., second daughter of Mr. R. Gass, "Fern Lea," Oxford.

DAVIDSON—STEWART.—At 11 Campbell Street, Dundee, on April 3, by the Rev. William Smith, of St. Paul's (South) Church, Robert Davidson to Maggie Agnes Graham, fourth daughter of Mr. Robert Gordon Stewart, chemist and druggist, Dundee.

DAWE—JEFFERY.—On April 7, at SS. Peter and Paul's Church, Tring, by the Rev. S. W. Tidswell, M.A., vicar, assisted by the Rev. S. H. Tucker, M.A., curate, Sydney, youngest son of the late James Dawe, to Emily Annie, second daughter of Mr. George Jeffery, chemist, Tring, Herts.

KEENE—PARRETT.—On April 11, at St. Michael's Church, Sittingbourne, by the Rev. W. Bell, M.A., vicar, Justin Leonard Keene, of Lofthouse & Saltmer, Hull, third son of the late Rev. Thomas Pacey-Keene, LL.B., Rector of Farleigh-Hungerford, Somerset, to Catharine Mary (Kate), second daughter of Mr. William John Parrett, Sittingbourne.

UMNEY—LOVELL.—On April 11, at St. Mary Abbott's, Kensington, W., by the Rev. W. Smyly, M.A., Vicar of Penge Percy Umney, M.A. Cantab., solicitor, 11 Queen Victoria Street, E.C., fourth son of Charles Umney, of Sydenham and Southwark, to Ethel Jane, fourth daughter of the late William Lovell, of St. Arvan's, Penge.

Deaths.

DAVIES.—On April 8, at Lower Honse, Arddleen, near Oswestry, Samuel Davies, chemist and druggist, aged 46 years, for many years assistant with Mr. Warner, Piccadilly.

GILLISPIE.—On March 28, Mr. John Gillispie, chemist and druggist, Dornoch. Aged 62.

EUCALYPTUS OIL is good for chilblains. Paint it on with a camel's-hair pencil. It relieves the pain, and soon cures. Cajunot oil is just as good.

Tobacco: its Therapeutics and Commerce.

WE take the following from a paper entitled "An Abused Member of the Solanaceæ," read to the Ulster Pharmaceutical Association by Mr. Alfred Adams, L.P.S.I.:—

After giving some historical details, Mr. Adams said dried tobacco-leaf contains a colourless, liquid, volatile alkaloid, "nicotine," heavier than water. It is one of the three liquid alkaloids of the B.P., the others being conine or sparteine and pilocarpine—any of these alkaloids can be obtained by distilling the medicinal parts of the plant with a solution of caustic potash.

Nicotine does not exist in the fresh leaf, but is developed during fermentation. Havana cigars contain about 2 per cent. of this alkaloid, and the heavy American leaf about 5 per cent. It is soluble in water, spirit, ether, or fixed the oils, and imparts a distinct flavour to a solution of 1 to 10,000 of water.

During smoking a heavy, empyreumatic, oily liquid is developed and distils over, called "nicotianine." It can be seen in a pipe which has been smoked for some time, and is a very energetic poison. It is supposed to be the "distilled juice of hebenon," with which Hamlet's father was poisoned [but this is erroneous.—ED.].

Besides these active principles we find a large quantity of mineral-matter—25 per cent.—with albumen, uric and malic acids, chlorophyll, &c.

Tobacco was formerly used largely in medicine. I find in old works quite a number of galenical preparations, such as tincture, wine, infusion, ointment; but the only one included in the 1867 B.P. was the enema, and even that has been omitted from the later edition. It was recommended for the relief of strangulated hernia and spasmodic retention of the urine and *fæces*; but, owing to the uncertainty of its action in small doses and its danger in large doses, it is never now used. The expressed juice of the leaf was applied in some cases of skin-diseases, and also in rheumatic pains; and I find it on record that it caused the death of a boy of eight years in three and a-half hours from its being applied to the forehead. Its best medicinal use seems to be as an antidote to strychnine.

Gardeners use an infusion of tobacco as an insecticide to kill insects on tender plants. Perhaps its most peculiar application is in the hands, or mouth, of cattle-jobbers, who inject, or expectorate, a large volume of saliva strongly impregnated with its juice into the eyes of all offending quadrupeds, to stimulate their movements by causing them intense pain.

In its wild state its broad, flat leaves are admirably suited to absorb the excess of CO_2 , which, some suppose, poisons the air in the malarial and swampy districts of which it is a native. But under cultivation it seems to have turned its back on its old friends, and now prefers a sandy soil or a light loam.

About the end of March a seed-bed is prepared by making a ridge with deep furrows on both sides; on this is built a heap of brushwood and timber, which is set fire to. This has a double effect: it kills the weeds and insects, which would otherwise ruin the young plants, and it supplies the mineral constituents, of which tobacco requires a great deal.

The seeds, which are very small, are mixed with sand to ensure even distribution, and about $\frac{1}{2}$ oz. to the acre is sown evenly over the ground and covered with a light coat of manure, over which is spread a heavy layer of ashes to keep away ants. In about three weeks the young plants begin to show above the ground, and in eight weeks are ready for transplanting to more open ground, where they are set in drills about $1\frac{1}{2}$ feet apart, and have to be carefully watered in dry weather, night and morning, and all weeds kept away.

As soon as the flowers appear they are nipped off, so that all nourishment may go to the foliage. The leaves are of three qualities—those at the base of the stem being coarsest and heaviest, those further up being medium, and those at the top mildest and finest. If a particular quality is required the others are kept pruned off, and, as a consequence, these are more numerous and larger; but, generally, three kinds are encouraged to grow.

In August the leaves are all removed from the plant, and are spread out in the sun to dry a little. They are then

built in heaps, covered over, and allowed to ferment for about a week, care being taken that the process does not go too far. By this process the albumen, which would retard the burning, is converted into the alkaloid and other products, and it is of the greatest importance that this operation be successful, for the whole value of the leaf depends on it.

On removal from the fermenting beds the leaves are sorted according to quality, tied in bundles (technically called hands), and hung up in a lough shed to complete the drying. They are then ready for the market, are bought by agents, packed in hogsheads, and sent to the factory.

Tobacco-leaf is greatly improved by a sea-voyage. Leaf grown in Ireland would not have nearly the same flavour as if it had been sent to America and back again. American leaf is similarly affected.

The requisites essential for good leaf are good colour, fair body, pleasant aroma, agreeable odour on burning, fine texture, perfect shape, and, finally, the leaves must answer the burning-test—that is, when once lighted they should continue to smoulder till consumed.

The regulations which control the importation of tobacco are very strict. Only vessels of above 120 tons burden can bring a cargo of tobacco, and there are only four ports where it can be landed. Liverpool and London alone receive 90 per cent. of all the tobacco imported. The bonded stores are immense sheds, where 50,000 hogsheads of leaf may be seen at a time. The duty on the raw leaf is 3s. 2d. per lb., on manufactured tobaccos 3s. 6d. to 5s. 6d., and on cigars 5s. 6d. None can be removed from bond till the full duty has been paid, and any unclaimed weed, with the sweepings and gatherings of the stores, are confiscated for the use of the "Queen's pipe," the common name for an immense furnace in which it is all consumed. After the duty has been paid the hogsheads are removed to the factory, from which it reappears as the common luxury of life.

I may mention a curious fact which is greatly troubling Yankee politicians and financiers. There is more money's worth of manufactured tobacco exported from the United Kingdom to the States than is paid for all the raw leaf coming in, owing to the very heavy duty; so that America is not only supplying England with tobacco-leaf free, but is also giving her a handsome surplus of cash on the transaction, all the profits of which go to the Crown.

In the factory the tobacco is first taken to the stripping-room, where it is spread out in heaps and carefully sprinkled with water, then allowed to set for twenty-four hours. A process of fermentation sets in, and the leaves become soft and pliable.

Next day the leaves are taken to the strippers, generally girls, who remove the midrib, taking care not to tear it or injure its shape. The midribs are subsequently made into snuff [chiefly for drawback as useless material.—ED.]. The more perfect leaves are kept for "wrappers," and the smaller and broken leaves are used as "fillers." For cigars good dark leaves are required, and they take about eight months to grow and two years to mature. For ordinary tobaccos such a long time is not essential.

The cigar-maker sits at a bench, with a sharp knife, a cutting-board, and a bottle of liquid gum. He spreads out a wrapper-leaf, and with his knife divides it in two, trimming it to the shape required; then in his right hand he takes a bunch of filler and rolls it with his fingers into a cylindrical shape, and rapidly closes it tightly in the wrapper-leaf, gumming the edges. Then with his knife he trims the cigar to the usual shape. An expert workman can so accurately guess the quantity required for each cigar that if given one pound of material he will return exactly 100 cigars. After cigars are made at least twelve months should elapse before they are smoked, to allow them to season.

The best cigars come from Cuba, but English-made cigars are beginning to rival them, and will ultimately supersede them. Good cigars should consist of the same leaf throughout; but I am afraid many of those sold are like the whitened sepulchre. Sometimes they are immersed in a solution of nitre to make them burn better, but this is not to be recommended.

In the making of cigarettes girls are generally employed, but in the more up-to-date factories they are made by machinery, a machine, called the "Eclipse," turning out 200,000 per diem. For hand-made cigarettes a number of

papers are spread out like seidlitz-papers, leaving just a margin of about $\frac{1}{8}$ inch exposed. Over this margin paste is spread, and a girl, with a brass rod the size of a lead-pencil, quickly folds each paper, slips it off the mould, and puts it aside to dry. She then rolls in a piece of stiff paper a small quantity of tobacco into a tubular shape, and this, by the aid of a small piston, is inserted into the mould-paper previously prepared, the ends trimmed off with scissors, and the whole operation occupies but a few seconds.

In making Irish-twist tobacco a long rope is prepared, containing filler in the centre and wrapped with large leaves; this is twisted on a bobbin, and subjected to enormous pressure and the action of steam. After seven days it emerges as the ordinary twist tobacco of the shops.

For cut tobaccos the mass of leaves is pressed into a mould until they adhere firmly. When removed the cake is the size and shape of a large ointment-slab. This is cut by a saw arrangement into four bars, about 2 inches wide and 12 inches long, which are then passed through the cutting-machine. In this machine is a large knife like a guillotine. The tobacco is placed on a sliding table, which moves under the knife at the rate of 1 inch for every twenty or thirty cuts as the machine is set. The tobacco is then ready for packing in boxes or parcels. Cavendish and other mixed tobaccos, after cutting, are placed on a hot tray, warmed by steam until they can be easily disintegrated, when they are tossed up and mixed by hand.

Numerous perfumes are used for flavouring, the principal being Tonquin-beans, oil of cloves, essence of vanilla, oil of cinnamon, &c.

The stalks removed from the leaves, with any injured tobacco, are used for snuff. They are first subjected to a secondary fermentation, during which, it is said, a great deal of the alkaloid is evaporated. The stalks are then removed to a kiln, where they are roasted, and afterwards ground in a large "mill," which is an immense conical iron mortar lined with wood, and with a couple of huge pestles moved by machinery, which soon reduce it to a fine powder.

The cigarette, which is the primary effort of all embryonic smokers, is the most injurious of all forms of smoking. Compared to the small amount of tobacco contained, there is a relatively large amount of extraneous matter, paper, &c., and the heat and fumes given off by this on burning are most deleterious to the throat. Unless made with a very good rice-paper they should not be used at all. As a rule, cigarette-smokers in this country draw the smoke into their mouths and then eject it; but in some foreign countries they draw the smoke with air into their lungs, where they retain it for a few minutes, and then exhale it. By this means the smoke comes in direct contact with the blood, and after one whiff that peculiar dreamy sensation of languor comes over one, and if continued for some time you become quite dizzy, and a cold sweat breaks out all over the body. In Spain consumption and like pulmonary-diseases are almost unknown, and it is to this practice that their absence is attributed, the smoke being so antiseptic destroys any germs or microbes.

The late Sir Morell Mackenzie used to remark that where a smoke was desired a cigar was the safest and best, and least likely to cause any harm to the throat or lungs. As I stated before, cigars contain about 2 per cent. of nicotine, therefore an ordinary cigar contains enough poison to kill two men. How, then, can a man smoke three or four in an evening without visible harm?

It has been proved by experiment that the greater part of the nicotine is consumed by the heat and combustion of the cigar, only a very small portion making its way over with the smoke. The empyreumatic oil which is developed at the same time, in passing through the "butt" of the cigar, is filtered out and retained, consequently when we come to the end of the cigar we find it much stronger. This oil becomes stale and mouldy on lying any time, and this explains why, if a cigar is not finished at one smoking, but is lighted again, it has a nasty, unpleasant, and stale taste.

The old Irish race is being slowly extinguished from the earth by cancer, which is directly attributed to the short clay pipes they continually use. I myself have seen five cancer-lips removed in one week in a country hospital, each one of which was caused by smoking.

Is smoking injurious? is a question often asked, and one

to which many different answers have been given. The human race never yet had an undivided opinion on any subject, and this one can lay claim to more diverse opinions than usual. When starting to write this paper my idea was to condemn the use of tobacco in all shapes and forms, but on looking for authorities to support my views, I found that all those who should be best fitted to judge did not condemn tobacco when used in moderation; but, as among the Israelites of old, every man must be a law to himself.

Allow me to quote a few authorities. The *Lancet* says: "We are not, as is well known, advocates of the disuse of tobacco. If moderately and wisely employed, it is a valuable sedative to the nerves, and has an especially soothing influence in the majority of instances." Professor Huxley said: "Smoking is a comfortable and laudable practice, is productive of good, and there is no more harm in a pipe of tobacco than in a cup of tea." The late Rev. C. H. Spurgeon, at the conclusion of a sermon on one occasion in his Tabernacle, said: "I intend to smoke a good cigar to the glory of God before I go to bed to-night, for I have found intense pain relieved, a weary brain soothed, and calm, refreshing sleep obtained by a cigar." Dr. Beck, renowned for his experience in diseases of the chest, writing on tobacco in asthma and consumption, declares: "Common observation settles the question that the moderate and daily use of tobacco does not prove injurious. This is the general rule; exceptions necessarily exist." Professor Christison says: "No well-ascertained ill effects have been shown to result from the habitual use of smoking." Bishop Burnett remarked: "I always smoke while I write," and Bishop Flecher frankly avowed, "I smother my cares in tobacco." Tennyson stated that he left Venice in disgust because they had no good cigars. Lord Clarendon admitted, "No man in Europe loves a good smoke better than I"; and Lord Brougham's testimony is, "I certainly derived the greatest benefit from a pipe of tobacco." Milton confessed, "I smoked each day while composing 'Paradise Lost.'" Ben Jonson said: "I will affirm before any prince in Europe that it is the most sovereign and precious weed that ever earth tendered to the use of man." Thackeray commended tobacco as "one of the greatest comforts of my life—a kind companion, a gentle stimulant, an amiable anodyne, a cement of friendship. May I die if I abuse the kindly weed which has given me so much pleasure." Bulwer Lytton was emphatic in his statement that "he who doth not smoke hath either known no great griefs, or refuseth himself the softest consolation next to that which comes from Heaven."

After the testimony of such illustrious men, what remains for me to add? In life's battle, amid the daily struggle for existence, with its accompanying pains and toils, we have a solace which is equally within the grasp of all—the artisan, weary from his day of toil, the clerk from his bench, the merchant from his counting-house, or the statesmen from the burden of a nation's cares. Enough that the cycle of the ages has now brought to perfection, and within the reach of the many, a pleasure and luxury which in the bygone years was but permitted to the few.

Camellia Thea.

(From a paper by Mr. D. O'Sullivan, read before the Pharmaceutical Chemists' and Apothecaries' Assistants' Association of Ireland.)

TEA is referred to by Confucius (550 B.C.), and by Yo Lu (618 A.D.) as having been taxed at the later date, showing that it was then in general use. In the seventeenth century tea was sold in England at 60s. per lb. It was then known as "chaw"; at that time the yearly import was under 100 lbs. In 1891 the figures were over 91,000,000 lbs. per annum for the British Islands alone. Green and black tea contain 26 per cent. and 15 per cent. of tannin respectively. Green tea causes giddiness and numbs the cerebral nerves, acting as a powerful brain-irritant. Tea alkaloid resembles strychnine in its effects. An injection of caffeine causes tetanus in the frog. In Northern Russia "brick tea" is meat and drink to the people, who first drink the infusion and then eat the leaves mixed with fat.

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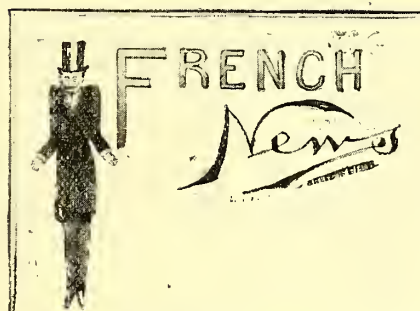
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THE METRIC SYSTEM.

WHEN the Select Committee of the House of Commons appointed to consider whether any, and, if so, what, changes should be adopted in our present system of weights and measures, reported last summer by a large majority in favour of making the metric system compulsory in two years from

that date, most people came to the conclusion that the Committee's legislative wisdom was not of a high order, and forthwith took no notice of the recommendation. Sir Henry Roscoe, who was the Chairman of the Committee, and apparently the chief advocate of the adopted report, has disappeared from Parliamentary life since then, and none of his colleagues have ventured to ask the House of Commons to give effect to the advice so confidently tendered to it only nine months ago; and we are not aware that there is even a proposal before Parliament to adopt the minor and unanimously-agreed-with suggestion made by the same Committee that the metric system should be at once made legal for all purposes.

A discussion has appeared in the *Times* during the past ten days which, if it has produced nothing very new in the way of facts or arguments, has at least shown how energetic would be the opposition to any seriously-proposed measure which should have for its object the displacement of our present system—or, rather, variety of systems—and the substitution of the metric system. In the first place, three long and rather pretentious special articles were published to show that the fundamental principle of the metric system was essentially imperfect, and that its faults were great and incurable. The fundamental imperfection turned out to be that the metre has in latter days been found to be $\frac{1}{1033}$ of an inch less than it was at first intended to be—namely, the one ten-millionth part of the fourth of the earth's circumference. We have all been aware of this imperfection from our childhood; but how it affects the principle of the system has yet to be shown. As the Chairman of the Committee of the New Decimal Association (Mr. J. E. Dowson) subsequently pointed out, the utility of the metric system would be in no respect impaired if it were based on the length of somebody's walking-stick, or on the length of a monarch's arm, as was the English yard. The great incurable faults are that ten will not divide evenly into thirds, fourths, eighths, &c., and that it could not well be applied to the circle, to the compass, to the year, to the week, to the day, and so on. Subsequent correspondents argued that there was no objection to the division of the metre into halves, thirds, or quarters, if it should be found convenient, and it was also remarked that the allegation that the system was worthless, because it would not be desirable to apply it to the circle, the compass, or the year, was about as intelligent an objection as it would be to refuse to bridge the Thames at London because it would be difficult to do so at Southend. The correspondent was finally allowed to waste a few feet of the *Times'* space in advocating, in Laputan fashion, the superiority of a duodecimal over a decimal notation.

Among the notable letters which these articles called forth was one from Sir Frederick Bramwell, who expressed his belief that the metric system was incompatible with mental arithmetic, required more figures to work out sums than does our own system, and was more likely to lead to mistakes, especially by the misplacement of the decimal point. Lord Grimthorpe, who seems to aim at being witty, says it is advocated by some pertinacious prigs, who want to force it down the public throat in order to save themselves trouble in dealing with metrified countries, and do not care how much they give to everybody else. Mr. J. C. Stevenson, M.P., the one member of the Select Committee who opposed the general conclusion, said the most important evidence brought before that Committee went to show that merchants and manufacturers were hampered in trading with metric countries on account of the difference in weights, measures, &c. On closer examination, however, it appeared that the real difficulty was the want of enter-

prise on the part of those merchants who would not take the trouble to translate their price-lists into the denominations of the countries with which they dealt. Other witnesses said they had no difficulty in making up their goods into kilogrammes, litres, &c., as required. No case was given, he added, where the authorities had interfered, and the County Council had given express instructions that there should be no prosecution for the use of metric weights and measures for foreign trade. He wished to see the system made permissive; but he objected to be compelled to abandon the grand old Saxon monosyllables, which are as old as the English language, and express in the simplest and clearest way its mental conceptions of weight, dimension, and distance.

Sir F. Bramwell sent an extract from an old French work by the Comte de Montholon, which professed to give, and gave very forcibly, the objections which Napoleon entertained to the compulsory imposition of the system in France. A correspondent with a long French experience (Mr. R. K. Gray) told how the century or more during which the metric system had been employed there had failed to disestablish the old weights and measures and moneys. An anonymous writer, who had also resided for a long time in France, had noticed that precious stones are to-day bought and sold in carats; firewood in cordes; milk in pintes; gravel in toises; grain, potatoes, and charcoal in boisseaux; wine in barriques, feuilletes, demi-setiers, and chopines; wood for construction in pieds, ponces, and lignes; beer in canettes and pots; and sugar and tea among the poor people in livres, demi-livres, &c. Cattle-dealing is carried on in pistoles and écus, and not in francs. Small money is dealt with in sous, and the franc itself is often spoken of as "une pièce de vingt sous." Calculations, which here would be made mentally, in France always necessitate working out on a piece of paper. One yard and three-quarters at $3\frac{1}{4}d.$ per yard can be worked out mentally, but 1m. 75c., at 35c. the metre, is not so easily calculated. He had found the decimal system much less convenient for the petty transactions of life which concern the bulk of the population than our system.

Sir Samuel Montagu and Mr. Dowson were the chief apologists for the metric system, a new part for them to play, for hitherto it is their party which has done all the sneering. Their case rests on the fact that at present the system is adopted by all civilised nations with the exception of the United States, Russia, and Great Britain. The nations who now use it number 445 millions, and both Russia and the United States are coming towards it. It is, they say, an ascertained fact that trade is lost to the United Kingdom because of the incomprehensible weights, measures, and moneys which we employ. Japan, for instance, other things being equal, deals with Germany in preference to England for the reason that the metric system is familiar to both those nations. The system may not be ideally perfect, but it is too late now to discuss that, to propose rival systems, or to try to tinker our own.

The influence of the *Times* was given unreservedly in this discussion to the opponents of the forcible introduction of the metric system. All parties agree, however, in the desire that it shall have a fair field. If it is in any degree unlawful to buy or sell by grammes, by metres, or by litres, such disability should be at once removed. Then let the best system win. This is all that the Decimal Association is at all likely to get in the way of legislation for many years to come; but having got this they can help forward the general recognition of the metric system by inducing tradesmen to give them the opportunity of buying their goods by metric weights, as they can already buy their medicines if they choose.

IODOTANNIC SYRUPS.

PROFESSOR GAY, of the Montpellier College of Pharmacy, communicates to the *Bulletin de Pharmacie* for March an interesting paper on "Iodotannic Syrups," which have been long used in France, but are practically unknown in England. That tannin has the property of absorbing iodine is well known, and Professor Gay points out that a definite compound is doubtless formed. If the two bodies are brought together alone, or in presence of alcohol, the combination does not come about, but if they are moistened with water a strong and tear-exciting odour is developed, and the mixture forms a red-coloured solution. The reaction is hastened by heating. With hydriodic acid the tannin changes partially to gallic acid and another acid. According to Guilliermond, who introduced *sirap iodotannique*, the best proportions for the combination are 1 part of iodine to 7 parts of tannin. It seems that the iodotannic compound is an excellent therapeutic agent, since it gives the peculiar action of free iodine without its irritating properties, and Professor Gay's paper is an attempt to place the preparation of the syrup upon rational grounds. Guilliermond's article was made by dissolving 2 grammes of iodine in a sufficiency of alcohol, and 8 grammes of extract of rhatany in water, mixing the two solutions, filtering after a few hours, evaporating the filtrate to about 360 grammes, and dissolving 640 grammes of sugar in the concentrated liquor. The Paris Society of Pharmacy has improved upon this by dissolving 1 gramme of iodine in 14 grammes of alcohol, and adding 985 grammes of syrup of rhatany.

A few years ago a French writer asserted that the combination of iodine in these syrups is not with tannin, but with the invert sugar produced in the syrup by the transformation of tannin into gallic acid by free iodine. This point Professor Gay has investigated, but he finds little corroboration for it, and all his results point to Guilliermond's original observation being correct. It is particularly noticeable that while 1-per-mille iodine solutions in tannic syrups cease to give the free iodine reaction at the end of twenty-four hours, similar solutions free from tannin, but containing glucose, react at the end of a day. It matters little, however, whether the iodine is combined with glucose or with tannin, as we have in it the combined astringent effects of tannin and the resolvent action of iodine. The following new formula is suggested by Professor Gay as giving an equivalent, but more elegant, product than rhatany:

IODOTANNIC SYRUP.

Iodine ..	..	..	..	..	gr. xij.
Rectified spirit	..	..	..	..	3ss.
Tannin ..	..	..	..	..	gr. xij.
Syrup to	..	..	..	..	Qj.

Dissolve the iodine in the spirit by trituration; add the tannin, then the syrup; heat the mixture to boiling (until it ceases to colour starch mixture), then filter.

The syrup produced has a pale-yellow colour, and a styptic taste. A similar and much more agreeable preparation is iodogallic syrup, prepared in exactly the same way as the above, but with gallic acid instead of tannin. Many other substances used in medicine absorb iodine in a similar way; for example, the essential oils, and such aromatic syrups as syr. aurantii. A very nice syrup can be made by adding tincture of iodine to simple syrup, then an aqueous solution of citric acid, allowing to stand until decolorised, and flavouring with tincture of lemon. The citric acid and the glucose which it produces absorb the iodine, and the principle underlying the reaction has been taken advantage of in making syr. ferri iodid. These iodotannic preparations appear to us to fill a place in galenic pharmacy which is blank in England at present, and they should be especially

useful in the treatment of certain disorders of children for which iodide of iron is commonly given. Frequently the iron is not wanted, nor iodine as an alkaline iodide, but a small amount of iodine in a loosely-combined form would often be highly advantageous; and it is to suggest a trial of these French preparations that we reproduce the salient features of Professor Gay's communication.

A SET-BACK TO ANTITOXIN.

CLOSE upon the heels of the not too sanguine report of the Metropolitan Asylums Board regarding the treatment of diphtheria with its antitoxin comes a somewhat tragic statement from Berlin about the death of an infant son of a medical man there, to whom a prophylactic dose of the diphtheria-serum had been administered. Dr. Langerhans, the father of the child, is not a believer in the serum treatment, but he states, in the death announcement, communicated by him to the Press, that he was persuaded by two medical friends to administer the prophylactic dose, mainly because he lost two children from the dreaded disease last year, and a maidservant in his house had at the moment been removed to the hospital on account of suspected diphtheria. So the father injected the serum, and "a few minutes after," to use the words of the *Times* correspondent, "the child, who was in blooming health, was dead." Here is that touch of nature which draws the sympathy of all to the grief-stricken parents; but that very fact tends to exaggerate the significance of the case, and it is but right that the opinions of scientific men, at least, should remain unbiassed until the facts of the matter are fully known. The *post mortem* examination of the child's body showed no positive cause of death, though it was discovered that the organs were healthy, and that the operation of injection had been so skilfully performed that death could not have resulted therefrom. Dr. Langerhans himself is apparently of opinion that the antitoxin was the immediate cause of death, and the remainder of it has been handed to the official analyst for investigation. The *Medical Press* points out that if German physicians "have been in the habit lately of giving preventive injections to the healthy members of households in which diphtheria has broken out, it is only fair to admit that no such practice has as yet prevailed in this country. Nor is it advisable that such a practice should be followed; inasmuch as, however valuable the antitoxin serum may be in the presence of virulent attacks of diphtheria, it is undeniable that our knowledge of the full extent of its potentiality has still to be elucidated." Moreover, the medical papers generally seem to be disappointed with the Metropolitan report referred to, and the *Lancet* is not sure that the 71 per cent. decreased mortality, attributed in the report to serum-administration, is not a continuance of the decrease from 59 per cent. in 1888 to 29 per cent. in 1894, which, there is no reason to suppose, would suddenly stop when antitoxin appeared on the scene. Mr. Lennox Browne, who from the first has been an uncompromising opponent of antitoxin, although his personal experience of its use does not appear to be exceptional, has recast the Metropolitan Board figures, showing that the mortality amongst all antitoxin-treated cases was 231 per cent., and amongst non-antitoxin cases 134 per cent. That the Metropolitan Board figures are not above suspicion appears to be generally admitted. But there is a far more serious matter still to be reckoned with in the antitoxin treatment of diphtheria—viz., the discovery that some patients show a greater proneness to kidney complications and paralytic symptoms under the new than under the old treatment. In this connection the fact may be recalled

that the director of the laboratories of the British Institute of Preventive Medicine was recently compelled to resign his appointment in consequence of a paralytic seizure which followed accidental inoculation while working with diphtheria-matter. Such results as these may be avoidable and explainable as our knowledge of the antitoxin increases, but it is right that it should be known that the serum is not an absolute specific, and that there is an element of danger in its administration.

NAVAL HOSPITAL DISPENSERS.

On Tuesday of this week a new order was issued by the Admiralty to the dispensers serving in the Naval Hospitals at Plymouth, Haslar, Bermuda, &c., to the effect that those holding the Minor qualification of the Pharmaceutical Society were equally eligible for promotion "in charge of stores," such positions being hitherto only open to possessors of the Major diploma. This concession will prove a great boon to those dispensers who by long service merit promotion, but who have been debarred from the same by not holding the voluntary qualification. The majority of the dispensers are Minor men.

BAD OIL OF CASSIA.

Although the quality of oil of cassia has of late years been generally above suspicion, according to English experience, it appears that this cannot be said of the oil found in the United States. Mr. Lyman F. Kebler, reporting on a number of samples to the Philadelphia College of Pharmacy last month, mentioned only one which contained above 70 per cent. of cinnamic aldehyde. Three samples of Yan Loong's were respectively sp. gr. 1.0452, 1.049, and 1.0428, with 56, 64, and 54 per cent. of the aldehyde. From one of the containers he obtained petroleum oil which had been added in excess of saturation. It would be interesting to know if this is to be taken as an indication of the return to the old condition of things, or whether Mr. Kebler's samples were old ones.

PIPER'S NEWS.

The London correspondent of the *Manchester Evening News* hears that "a chemical discovery of enormous public interest has just been made by a London analyst, who has already secured the assistance of the British Government for a practical test of its charms [? claims]. This is no less than a direct solvent for cotton, which is itself volatile, and leaves behind it nothing but pure cellulose. The specific form of the departmental encouragement above referred to is a definite contract for sacks in this new cotton-pulp, to which the name of 'viscose' is given." Truly, it takes a long time for some people to find out things. The viscose referred to is the invention of Messrs. Cross, Bevan and Beadle, and was described to the Chemical Society exactly three years ago this week. The volatile solvent is carbon bisulphide.

BARGAINS.

The publisher proposes to repeat next week the extra circulation of THE CHEMIST AND DRUGGIST Supplement, which proved so effectual on March 7 as a means of disposing of second-hand and surplus stock, apparatus, &c., through our Exchange Column, which is now printed in the Supplement. The circulation of the issue will be over 14,000 copies, and it will be well worth the while of all subscribers, whether in the wholesale or retail, to look round their premises to see if there is anything which they can turn into money quickly by advertising in the Exchange Column. Stock which has become unsaleable in one district, or which may for some other reason be unremunerative to the holder, can thus be disposed of to advantage. The Exchange Column is equally suitable for getting odd articles which are wanted.

CO-OPERATION: A REMEDY FOR LOW PRICES.

A Mr. A. Garnett, who writes from an address at South Tottenham (and whose name does not appear on the register of chemists and druggists), sends us a long letter describing a company which he says is being formed, with himself as secretary, the object of which is to give chemists the benefits of co-operation in buying. On one day a week the associated chemists are to send in their orders, and then the philanthropists who run the company are to buy the goods required at the lowest prices and distribute them, charging only a small percentage "to cover working expenses." We know that scheme very well; it is going to save 25 per cent. on the cost of drugs, and needs almost no capital to carry it out. It has come before us a good many times, but it is not in working order yet; and wholesale druggists, who are to be wiped out by it when it does appear, may hope for a little further respite even yet.

THE DISRAELIAN EPIGRAM RE CHEMICALS.

Mr. H. W. Lucy has let out the origin of the celebrated epigram coined by the late Earl of Beaconsfield in regard to the country's prosperity being synchronous with the demand for chemicals. When it was uttered "everyone marvelled," says Mr. Lucy, in the *Strand Magazine*, "that Mr. Disraeli, immersed in political affairs, should have fathomed this profound trade secret. There it was, tossed to the crowd in an off-hand manner, indicative of there being in stock ever so much erudition of a similar kind. The incident coming up in conversation some time after, Sir George Elliot told Mr. Lucy that, at Hughenden, during one of his visits, on the eve of the delivery of this speech, Mr. Disraeli cross-examined him sharply as to how things were going in the manufacturing districts. Sir George thereupon let him into the secret of the bearings of fluctuations in the sale of chemicals, and a few days later the Premier (as Mr. Disraeli was at the time), with accustomed sententiousness and gravity deeper than usual, flashed the truth upon the astonished public, just as in earlier days he had at Aylesbury instructed the pleased farmers, at the Saturday ordinary, on the intricacies of cross-breeding on sheep-farms."

COUNTER-PRESCRIBING.

Writing to the *Medical Press* upon this subject, Mr. R. J. Downes, of Dublin, points out the difficulty of drawing a line, and puts a rather hard nut for the editor to crack when he says that a gentleman, who has much offended the *Medical Press* by prescribing in a chemist's shop, had continued the practice which he had learnt in a medical man's shop. The *Medical Press* thereupon remarks: "If such a person is allowed by the criminal connivance of his master to prescribe, his doing so is totally contrary to medical principle and medical law, and his master is liable to be expunged from the register for allowing his name to be used for such purpose." Our King William Street confrère had better read that sentence over carefully; it is an excellent example of how temper may run away with talent. Mr. George Foy, L.A.H., F.R.C.S.I., who, if we mistake not, was early taught the art of pharmacy, also joins in the discussion by giving Dublin pharmacists a stern rebuke. "It is a pity," he says, "that pharmaceutical chemists, instead of practising quackery, do not give more attention to their legitimate business. Within a comparatively short time the following substitutions have been practised on my patients by Dublin pharmacists:—(1) Gallic acid given for agaric acid; (2) phenol given for formol; (3) chloral given for chloralose; (4) liq. opii (Battley) given for liq. hyosciami (*sic*) (Battley). In each case the pharmaceutical chemist considered he had completely exonerated himself when he confessed total ignorance of the drug ordered." We should like to see these prescriptions; they might be worth reproducing in *facsimile*.

Tincture of Myrrh.

By J. F. LIVERSEEGE, Ph.C., F.I.C.

FOR the preparation of tincture of myrrh the British Pharmacopœia directs that 2½ oz. of myrrh in coarse powder shall be macerated in 15 oz. of rectified spirit for forty-eight hours, then percolated with 5 oz. more spirit, and diluted to a pint. Mackenzie (*Pharm. Journal* [3], xviii., 467) states that the maceration is useless, a conclusion which is supported by the results of Findlay (*Pharm. Journal* [3], xxi., 551), who found the same amount of extract in tinctures prepared by one, two, seven, or fourteen days' maceration in rectified spirit. Experiments of my own also show that percolation, either alone or with previous maceration, practically gives the same results, but that percolation is more convenient—at any rate, on a small scale. In fact, it is difficult to see why maceration should be ordered for a gum-resin like myrrh, which contains no woody tissue. Findlay also gives the extract found in tinctures prepared with various strengths of alcohol, as follows*:

Per cent. absolute alcohol (by weight)	84	65	60	49	38
Extract (grammes per 100 c.c.)	.. 4.58	3.55	3.55	2.75	1.7

Wright (*Year-book of Pharmacy*, 1890, 471) found similarly that rectified spirit dissolved more solid matter than weaker alcohol, thus:—

Spirit 84 per cent. = 4.35 extract; 65 per cent. = 3.32; 60 per cent. = 2.17.

Spillsbury (*Analyst*, xiv., 208) gives average sp. gr. as .849, and average extract as 3.66 grammes per 100 c.c. Savage (*Proceedings British Pharmaceutical Conference*, 1864, 59) also gives 3.66 grammes extract per 100 c.c. Fletcher (*C. & D.* 34, 110) records .845 as sp. gr., and extract as 1.98 gramme per 100 c.c. when dried at 45° to 50° C., and 1.60 when dried at 120° C., and found 151 per cent. of proof spirit (equal to 68.5 grammes per 100 c.c.) by distillation. It will be noted that the first four workers found from 3.66 to 4.58 grammes extract per 100 c.c., but that the last only about half as much. These conflicting results led the writer to investigate the matter by preparing tinctures from various samples and analysing them and others by the methods here given.

Specific Gravity.—A 25-c.c. stoppered sp. gr. bottle with a mark on the neck was used; the temperature was adjusted to about 60° F., and read by a small thermometer placed in the bottle. The observed sp. gr. was corrected by adding or subtracting .00045 for each 1° difference above or below 60° F.

Extract.—Quantities of 5 c.c. were evaporated to dryness on the water-bath in flat-bottomed German-silver dishes 3 inches in diameter and dried about six hours in the water-oven.

Alcohol.—If tincture of myrrh is diluted and distilled the results are much too low, as the volatile oil (sp. gr. about 1.0) distills over with the alcohol. This may be partly prevented by adding successively to the milky mixture of tincture and water saturated solutions of calcium chloride and sodium phosphate and filtering. With a tincture containing 4 per cent. extract it was found that, after this treatment, addition of water produced no further precipitation, if at least two volumes of water were mixed with one of tincture, but that even if the volume of water was ten times as great as that of tincture the volatile oil was not entirely removed by this method. The following process was adopted:—Ten c.c. of the tincture was added to 25 c.c. water in a stoppered cylinder, then 1 c.c. each of saturated solutions of calcium chloride and sodium phosphate, filtered into the distillation-flask and washed with about 10 c.c. water, the funnel being covered to prevent evaporation of spirit. About 23 c.c. was distilled into the 25-c.c. bottle, the temperature and volume adjusted, and the bottle weighed.

The next 5 or 10 c.c. of distillate was found to be heavier than water. In all cases the distillates smelt more or less of myrrh, and were 3 or 4 per cent. absolute alcohol too low.

As distillation proved so unsatisfactory, an attempt was made to estimate the alcohol by an indirect method. If $T = \text{sp. gr. of a tincture}$, and $S = \text{sp. gr. of the spirit used for making it}$, and $Ew = \text{grammes of extract per 100 c.c. of tincture}$, and the ratio $\frac{T-S}{Ew} = K$, where K is a constant, the following equation will be true:—
(I.) $S = T - KEw$. Experiments showed that rectified spirit with various myrrhs gave a value for K of about .003. In other words, if the extract is multiplied by .003, and the product subtracted from the sp. gr. of the tincture, the difference will be the sp. gr. of the spirit used for making the tincture. Reference to the following table will give the amount of alcohol corresponding to the sp. gr. usually found:—

Specific Gravity	Grammes per 100 c.c.	Specific Gravity	Grammes per 100 c.c.
.830	.. 72.4	.838	.. 70.5
.831	.. 72.1	.839	.. 70.2
.832	.. 71.9	.840	.. 70.0
.833	.. 71.7	.841	.. 69.7
.834	.. 71.4	.842	.. 69.5
.835	.. 71.2	.843	.. 69.3
.836	.. 71.0	.844	.. 69.0
.837	.. 70.7	.845	.. 68.8

The analyses below show that the alcohol calculated to be in the spirit used was within $\frac{1}{2}$ per cent. of the true value. Before the amount of alcohol in the tincture can be obtained it is necessary to know the volume occupied by the extract. If there are Ev c.c. of extract, and W grammes, or V c.c. spirit in 100 c.c. of tincture, and if (II.) $T = \frac{Ew + W}{Ev + V}$, then shall

$$(III) \quad Ev = \frac{Ew - 100(T - S)}{S}$$

For the equations to be correct the following statements must be true, or nearly so:—(a) Solution of the extract in spirit must be accompanied by no contraction in volume. (b) The spirit used must not be weakened by water in the myrrh. (c) The dissolved portion of the myrrh must be identical with the extract as weighed. It is not probable that any of these assumptions are absolutely correct, so experiments were made to see if the errors were negligible.

Twenty-five c.c. of tincture of myrrh was evaporated to dryness in the 25-c.c. specific-gravity bottle, the extract was dried several hours in the water oven, the bottle filled up to the mark with spirit, after some time the extract dissolved without any appreciable change of volume, thus showing that (a) is practically true. If (b) and (c) are true, and spirit of the same sp. gr. is used for making the tincture and dissolving the extract, the sp. gr. of the original tincture and that of the extract dissolved in spirit should be identical. The sp. gr. of the tincture was .8461, and that of the dissolved extract (corrected for the difference in the sp. gr. of the spirits) was .8459, an amount of error that is negligible. Equation (III.) may then be taken as sufficiently accurate for the purpose, particularly as there is only about 4 per cent. extract present. For $(T-S)$ in it may be substituted .003 Ew or EwK [see equation (I.)], and we get (IV.) $Ev = \frac{Ew - .3Ew}{S}$. Now, as the numerator may

be written .7 Ew , and as S varies only slightly from .838, we finally get, by division, (V.) $Ev = .84Ew$, or that the volume of the extract in solution is 84 per cent. of its weight. The strength of the spirit used and the volume of the extract being obtained, a proportion sum will give grammes of absolute alcohol present in 100 c.c. of tincture.

The following tinctures were prepared on a small scale from samples in about No. 20 powder by percolation only with spirit, sp. gr. .8384, equal to 70.4 grammes absolute alcohol per 100 c.c. In no case was the drug exhausted, so probably higher results for extract would be obtained if the tinctures had been made on a larger scale. Samples I. and II. were good myrrhs, III. was marked Abyssinia, IV. Berbera, and V. Arabia. The last two samples were inferior or adulterated, and were composed of light and dark pieces,

* In several cases the results given in the papers quoted have been calculated to another basis for convenience of comparison.

which were separately made into tinctures marked *l* and *d* respectively.

No.	Tincture.		Spirit used (calculated).		Extract $\times 34$	Absolute Alcohol in Tincture g. per 100 c.c.
	Sp. Gr.	Extract g. per 100 c.c.	Extract $\times 003$	Sp. Gr.	Absolute Alcohol g. per 100 c.c.	
I.	.858	4.5	.013	.845	68.8	67.2
II.	.851	4.8	.014	.837	70.7	67.9
III.	.850	3.6	.011	.839	70.2	68.1
IV.	.848	3.1	.009	.839	70.2	68.4
V.	.846	2.4	.007	.839	70.2	68.9
VI.	.848	2.8	.008	.840	70.0	68.3
VII.	.849	3.1	.009	.840	70.0	68.2

The low result for spirit in No. I. is due to evaporation, the tincture being left percolating all night in a partly closed vessel; the others agree very well with 70.4, the spirit actually used. It will be seen that all the tinctures contained decidedly more than 1.98 of extract, and that the range of the first three—3.6 to 4.8—agrees very well with the other results quoted. The following analyses of thirteen bought samples of tincture support the opinion that a tincture properly made from good myrrh will contain about 4 grammes of extract and 68 grammes absolute alcohol per 100 c.c. of tincture. Of the eight samples bought from retail chemists one (No. 13) was low in extract, and was, I believe, made without percolation; of the three from unqualified dealers, two were deficient, one in extract and one in spirit.

No.	Specific Gravity	Grammes per 100 c.c.			Qualification of Vendor
		Extract	Absolute Alcohol (calculated)		
			Spirit	Tincture	
1	.853	4.3	70.0	67.5	Wholesale
2	.856	4.4	69.3	66.5	Wholesale
3	.852	4.4	70.2	67.5	Unqualified
4	.852	3.8	69.7	67.5	Minor
5	.845	4.9	72.4	69.5	Minor
6	.856	4.6	69.5	67.0	Business
7	.847	4.0	71.2	69.0	Modified
8	.856	4.0	69.0	66.5	Business
9	.853	3.5	69.5	67.5	Minor
10	.855	3.5	69.0	67.0	Minor
11	.854	3.7	69.8	59.0	Unqualified
12	.849	2.9	70.0	68.5	Unqualified
13	.848	2.7	70.0	68.5	Minor
Averages					
1-10	.853	4.2	70.0	67.5	
1-11	.855	4.1	69.1	67.0	
1-13	.854	3.8	69.3	67.2	
Theory	.850	4.0	70.4	68.0	

New Books.

Davies, T. *The Preparation and Mounting of Microscopic Objects*. Edited by John Matthews. New edit. 12mo. Pp. 222. 2s. 6d. (Gibbings.)

Hyde, J. N., and Montgomery, F. H. *A Manual of Syphilis and the Venereal Diseases*. Crown 8vo. Pp. 618. 12s. net. (Hirschfeld.)

Jago, W. *Inorganic Chemistry: Theoretical and Practical. With an Introduction to the Principles of Chemical Analysis, Inorganic and Organic. An Elementary Text-book, rewritten and enlarged.* Cr. 8vo. Pp. 446. 2s. 6d. (Longmans.)

Scarff, Alfred M. *The Taxpayers' Cash-book: being an easy system of bookkeeping for small businesses, with full instructions and examples for ascertaining profit and making returns for income-tax, and preparing accounts in support of an appeal against income-tax overcharges.* 8vo. Pp. 12 and tables. Cardboard covers. 2s. 6d. (Income-tax Adjustment Agency.)

Tschirch, Dr., and Dr. O. Oesterle. *Anatomischer Atlas der Pharmakognosie und nahrungsmittelkunde*. Lief. 10. 1m. 50pf. (Williams & Norgate.)

Wallsgrave, J. *The First Steps to a Practical Knowledge of Amateur Photography and Beginner's Note-book*. Published by H. Hands, chemist, Fenny Stratford, at 4d.

Medical Gleanings.

A REMEDY FOR CHILBLAINS.

PROFESSOR BOECK, of Christiania, suggests the following inelegant but most effectual remedy for children's chilblains:—

Ichthyoli ..	..	..	..	..	3j.
Resorcin ..	..	..	..	..	3j.
Tannini ..	..	..	..	..	3j.
Aquæ ..	..	..	..	..	5v.

M.

To be painted on each evening.

When thus applied, the fluid in a few minutes forms a varnish on the skin, and causes the chilblain and swelling to disappear. The objection to the remedy is that for a week or fortnight the parts look black and dirty, and some persons cannot stand the application of resorcin to their skins.

PRURITUS ANI.

REGULATE the bowels with the late Sir Andrew Clark's pill taken once, twice, or thrice a day, namely:—

Aloin...	..	..	..	..	gr. ss.
Ferri sulph...	..	..	..	..	gr. ss.
Ext. nucis vomicæ...	..	..	..	..	gr. ss.
Pulv. myrrhæ ..	..	..	..	..	gr. ss.
Saponis ..	..	..	..	..	gr. ss.

If no relief is obtained add—

Acidi arseniosi ..	..	..	..	..	gr. $\frac{1}{10}$
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Also use the following lotion, suggested by Dr. A. Cooper Key in the *British Medical Journal*:—

Pulv. sodæ bibor. ..	..	..	..	..	gr. xx.
Glycerini ..	..	..	..	..	3ij.
Naphthæ rectificat. ..	..	..	..	..	3ss.
Aq. flor. sambuci ad ..	..	..	..	..	3vj.

M. Ft. lotio.

Or—

Calaminæ levig. ..	..	..	..	..	3iss.
Acid. hydrocyanic. (Scheele's) ..	..	..	..	..	3ss.
Glycerini ..	..	..	..	..	3ij.
Liq. calcis ad ..	..	..	..	..	3viij.

M. Ft. lotio.

The following cooling-lotion for pruritus is recommended by the *Practitioner*:—

Liquoris ammonii acetatis ..	..	..	..	..	3ij.
Acidi hydrocyanici diluti ..	..	..	..	..	3j.
Spiritus rectificati ..	..	..	..	..	3iij.
Aquæ rose ad ..	..	..	..	..	3viij.

To be applied locally.

URINE-SUGAR TESTING.

SIR W. ROBERTS, M.D., in a paper communicated to the *Practitioner*, comments upon the uncertainty in testing for sugar in urine, the reduction by Fehling's solution not always being due to sugar. To make perfectly sure he strongly advocates preliminary filtration of the sample three times through a purified animal charcoal filter. This decolorises the urine and completely removes the uric acid and urates, whereby the urine is brought to a peculiarly favourable condition for giving a clear and definite response to the application of the copper test. In order to obtain the most delicate indications it is necessary to proceed in the following manner:—Charge test-tube with Fehling's solution to the depth of about a quarter of an inch, add the filtrate to the depth of about 2 inches, thoroughly mix and apply the flame of a lamp to the upper half of the liquid, and briskly boil for a couple of seconds. If the tube is then held up to the light, when sugar is present the upper half is soon seen to lose its blue colour and assume a yellowish tinge; and the earthy phosphates, which are thrown down in light flocks by the alkali of the test, are tinted more or less of a golden colour by the precipitation on them of the yellow suboxide of copper. If only a minimal quantity of sugar be present, the fading of the blue colour and the assumption of a yellow tinge are slowly developed, and only become marked as the liquid cools; and the yellowing of the phosphatic flocks is but slight.

The Anti-cutting Crusade.

A MEETING of the Midland Pharmaceutical Association was held on Wednesday night at the Grand Hotel, Birmingham, to discuss the question of cutting in pharmacy. A deputation from the Proprietary Articles Trades Association, consisting of Messrs. Glyn-Jones, G. R. Barclay (Barclay & Sons, Limited), J. Norris (Condal Water Company), C. H. Corbett (Stephen Smith & Co.), A. Borthwick (Bovril Company), and W. Simpson (Liebig Company), attended.

Mr. R. Darton Gibbs (President of the Midland Association) occupied the chair, and about seventy of the leading pharmacists of Birmingham and the district, wholesale and retail, attended. Apologies for absence were announced from forty-one chemists who were in sympathy with the movement.

The Chairman, in opening, recalled the circumstances which had led to the establishment of the local committee, which he explained primarily was brought into existence as the result of meetings in Birmingham, addressed by Mr. E. J. Smith, of Birmingham, and Mr. Glyn-Jones, Secretary of the anti-cutting movement in London. The scheme which Mr. Smith put before them was different to that of Mr. Jones's, but they believed there was more than one scheme which might be suggested with advantage. After hearing these gentlemen, the Midland Pharmaceutical Association appointed a number of gentlemen to inquire into the whole subject and report to a future meeting. It was in order that that report might be submitted that they had assembled that evening.

Mr. W. Jones (Chairman of the Committee) then read the report, which stated that the committee had made various suggestions to the London Association, and in the majority of cases these had been adopted—notably the rejection of the rebate scheme, and the substitution of a scheme on lines similar to that of Elliman's. The committee also suggested modifications of the composition of the P.A. Trade Association's Council, in which they thought the retail trade was insufficiently represented. Those, they regretted to say, were not carried, but they hoped to see their modification adopted at some future time. The committee recommended that members of the Midland Association should become members of the Proprietary Articles Trade Association; that individual pressure should be brought to bear upon manufacturers who have not as yet joined the P.A. Trade Association, to supplement the efforts of the London committee; that any scheme dealing with the guarantee of profit should not contain any system of rebate, which system they consider unworkable and unsatisfactory; that the system of bonus given by co-operative societies to their customers be fully considered and arranged for before any scheme of guaranteed profit is definitely settled; that members pledge themselves not to distribute handbills nor in any way assist the sale of any proprietary articles upon which a profit is not guaranteed, or whose proprietor has not joined the Proprietary Articles Trade Association; that a trade committee of the Midland Pharmaceutical Association be permanently appointed. In moving the reception of the report, Mr. Jones said he should like to see pharmacists go back to the old days when the patent medicine was sold at 1s. 1½d., so that they could have a reasonable profit. At least he hoped they would be able to secure 20 per cent., if not 25 per cent. There was an impression abroad that the members of the Association must agree not to substitute. Nothing of the kind would be asked, and it would be left to the discretion of the members. A difficulty existed in regard to co-operative societies, inasmuch as, although they might sell at 1s. 1½d., they gave a bonus to their customers. The clause which pledged the members not to distribute handbills, or in any way assist the sale of proprietary articles upon which a profit was not guaranteed, was a little coercive, but he thought they would do well to enforce it.

Mr. M. Magor seconded. Alluding to the first recommendation, he observed that they had to depend upon London, and the proper course for pharmacists in the provinces was to join the central body. How to cope with the co-operative societies was an important point, particularly as regarded bonuses. They wanted it to be understood that whilst societies had a right to trade the same as others, they should not endeavour to induce anyone to go to them

through the offer of a bonus. (Hear, hear.) He took it as a matter of course that no person was going to assist the sale of proprietary articles upon which a profit was not guaranteed. (Hear, hear.) At present they sold goods at a profit which did not cover working expenses. That was not legitimate or proper trading.

Mr. G. R. Barclay, speaking on behalf of the wholesale traders, said it was well known that the majority of the retail traders did not cut prices from the love of cutting; but they did it because they were forced to by a small minority. It was a question whether they would be forced by a minority, or turn the tables on the minority, and force them to do what the majority wanted. (Hear, hear.) Should the tail continue to wag the dog, or should the dog wag the tail? (Hear, hear.)

Mr. Barratt (Leamington) referred to the importance of combination, observing that combination in its truest sense was not tyranny. It was a policy which every Conservative as well as every Radical might adopt, and one which, in these days of competition, every tradesman ought to enforce. They must join that anti-cutting society if they were to live at all. They would not take up the position of defying grocers. They did not defy them, and the only thing they wished to impress upon grocers was that they were not the only people who had to live. (Hear, hear.) They must not attempt to say that children's foods, and other such things, must not be supplied to grocers, and that chemists should have the sole right to sell them; but they must insist that a fair price should be paid to the grocer for such articles. He thought grocers would be ready to toe the line, because they were, he believed, as sick of cutting as chemists were.

Mr. Glyn-Jones, replying to questions as to the position of the Proprietary Articles Trade Association, said that the number of retail traders who had joined was between 400 and 425. If the movement had rested entirely with the retail traders nothing would have been done.

Mr. W. Wakefield strongly urged the claims of the Trade Association, and

Mr. Bird, as a manufacturer, expressed his hearty sympathy with the movement. He added that chemists were recognising that it was absolutely necessary to ally themselves with the grocers in this matter.

The representative of Hall's Coca-wine Company remarked that the determination of their firm to stop cutting, so far as their article was concerned, had been attended with success. Their experience was that it had increased their sale, and business with their customers was now a pleasure.

Mr. C. Thompson thought the reason why so few chemists had joined the movement was because they were waiting to see what the Anti-cutting Association intended to do. He should like to know if it was the intention of the London committee that anyone who was not a member of the Association should not be able to get the goods of the manufacturers in London who belonged to the Association.

Another member asked if the London or local committee were going to adhere to a policy of getting 20 or 25 per cent. profit. The retail trades, he said, could not live on a 10-per-cent. profit.

Mr. Glyn-Jones, in reply, contended that chemists should not wait to see what scheme was offered them before they joined the Association. He should feel justified in urging upon them to join, with the view to improving their position, even if no scheme had been formulated. He considered the fair retail profit must be 20 or 25 per cent.

The resolution was then put and carried.

Mr. Barlow moved the adoption of the report.

Mr. T. Barclay, in seconding, said by the formation of the Anti-cutting Association an effort was being made to uplift the social position of the trade. He took it that it was in the interests of the public as well as of the trade that an organisation of this kind should be supported and manned by persons who took a broad view of life and things, and who would do nothing that was dishonourable. Such men headed the movement which they had met there to support. They knew that the present system of cutting which obtained in many places was not legitimate trading, and that the prices at which goods were sold did not leave a margin of living profit. That being so, they knew that the pharmacist must ask an unfair profit on other articles, and consequently it was in the interests of the public that a reasonable profit should be obtained all round. (Hear,

hear.) He was sorry to find that so few retailers had joined the Association, which was working even more in the interest of the retail than in that of the wholesale trade. The success of the Society depended on the adhesion of the retailers, because until the manufacturers knew that the Society had taken root amongst them the wholesalers might, as a body, be inclined to stand on one side.

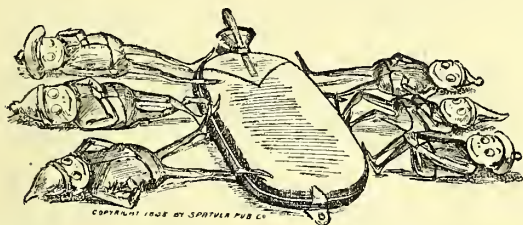
The resolution was carried unanimously.

On the motion of the Chairman a vote of thanks was passed to the members of the deputation for their presence, and Mr. J. Norris spoke in acknowledgment. The proceedings terminated with thanks to Mr. Gibbs for presiding.

During the evening all the retailers present gave in their names as members of the Association.

Brownies in Advertisements.

MR. PALMER COX has given American advertisement experts more material for effective display than any living writer for children. Even druggists have got hold of the funny little fellows, called Brownies, and we show here how they use them:—



This has below it the following inscription, set up in old-face small pica type:—

GOT A HOT-WATER BOTTLE?

A hot-water bottle is a wonderfully useful thing to have in the house. There is nothing like heat to relieve pain and start sluggish circulation. Cold feet? Can't sleep? A hot-water bottle at the feet will send you to dreamland in a minute.

We have them in several sizes, all made by the best makers, of the purest Para rubber. They last for years—the handiest, safest, cheapest, best all-round home doctoring there is.

Another is even more amusing, but in England we have scarcely reached that stage at which no courage is required to use such advertisements:—



WANT A SYRINGE?

Of course, every well-regulated household wants one. But there are syringes and syringes—those that don't work, and those that do. If you want the first, we haven't them; if you want the last, the kind that work, and work well, and always work, we have them.

We carry only the best makes—best in material and best in workmanship. In prices they run from 50c. up. The lowest prices ever offered in this town on such high-grade goods.

The *Spatula* has spread these things before our vision.

MESSRS LONGMANS & CO. have in preparation an English edition of the German standard work by Dr. Carl Freiherr von Tuben, of Munich University, on *Diseases of Plants due to Cryptogamic Parasites*. The translation is by Mr. William G. Smith, B.Sc., Ph.D., lecturer on plant physiology to the University of Edinburgh.

London Drug Statistics.

THE following statistics relate to the movement of some of the leading drugs in the London public warehouses in the course of the first three months of 1896 and 1895. The statistics are supplied by the warehouses in question, and their accuracy cannot be guaranteed. It should also be noted that certain warehouses refuse to supply returns, and that several figures, notably those relating to oils of star-anise and cassia and to camphor, are therefore incomplete.

Article	Stocks		Imported		Delivered	
	1896	1895	1896	1895	1896	1895
Aloes.....cs, &c.	4,515	4,613	1,141	433	1,617	448
".....gourds	2,36	3,129	—	—	383	94
Anise, Star.....cs	243	461	—	—	28	15
Arrowroot.....brls	14,841	12,916	4,812	7,322	3,620	4,426
".....bxs & tins	1,613	2,284	145	605	561	687
Balsams (all Medicinal).....cks, &c.	1,087	1,033	220	235	496	377
Borax.....pkgs	16	—	—	—	25	—
Calumba.....bgs.	817	964	11	106	416	184
Camphor.....pkgs.	13,699	4,708	836	1,611	3,410	1,203
Cardamoms, pkgs, &c.	619	1,205	394	943	952	712
Cinchona-bark—						
S. American.....cs	58	64	—	—	—	—
".....bls, &c.	15,567	19,438	719	1,976	2,401	2,559
E.I. Ceylon.....cs	182	145	—	3	88	49
and Java.....bls	10,337	12,103	4,766	3,927	3,592	3,609
Cochineal.....bgs.	1,659	2,321	604	934	684	546
Oculus Ind.....	174	114	147	—	64	20
Cream of tartar.....cks	5	—	—	17	—	17
Cubebs.....bgs	376	260	—	7	20	133
Outch.....tns	1,755	2,604	445	366	401	495
Dragon's Blood.....cs	161	195	60	100	78	92
Galls, China & Jap.....	1,114	425	1,116	293	509	365
Trky & Persn.....bgs	4,053	—	401	—	1,455	—
Gambier.....tns	1,162	720	1,929	2,073	1,503	1,322
Gums—						
Ammoniacum pgs	60	107	15	72	26	40
Animi & Copal.....	8,159	8,484	4,551	3,764	5,102	4,995
Acacia.....	10,361	12,100	6,479	6,122	6,459	4,219
Asafoetida.....	1,058	387	725	468	430	254
Benzoin.....	1,523	1,921	899	1,063	884	888
Damar.....	3,386	3,751	3,099	3,060	1,806	2,343
Galbanum.....	2	11	—	—	—	—
Gamboge.....	239	237	168	69	88	40
Guaiacum.....	31	70	32	8	58	64
Kino.....	14	8	2	2	2	11
Kowrie.....tns	1,075	2,250	544	860	908	800
Mastic.....pkgs	29	17	21	—	12	4
Myrrh.....	612	456	—	195	160	161
Olibanum.....	4,028	5,456	3,409	3,421	1,435	996
Sandarach.....	393	742	410	351	279	402
Tragacanth.....	2,709	2,698	2,108	1,746	1,372	1,700
Ipecacuanha (Brazil).....bls	498	660	110	127	196	238
Other kinds pgs	14	53	31	33	61	77
Jalap.....bls	148	132	14	10	118	67
Lac Dye.....chts	2,744	2,901	—	—	50	8
Nitrate Soda.....tns	2,629	1,240	6,539	3,518	5,884	3,472
Nux Vomica.....pkgs	669	997	71	366	500	267
Oils—						
Anise.....cs	88	273	20	389	62	172
Cassia.....	37	154	8	25	2	5
Castor.....cks	112	60	328	54	283	80
".....cs	881	1,302	334	360	538	652
Cocoa-nut.....tns	716	1,021	658	1,393	683	1,137
Olive.....cks, &c.	883	1,022	912	562	456	635
Palm.....tns	10	6	30	16	29	15
Quinine, sulph.† lbs	116,578	157,960	6,159	4,000	12,837	18,118
Rhubarb.....cs	721	1,477	148	611	348	689
Safflower.....bls, &c.	94	130	49	1	34	18
Saltpetre.....tns	598	302	1,265	974	857	1,093
Sarsaparilla.....bls	220	402	216	356	262	298
Senna.....bls, &c.	1,609	2,087	679	786	1,567	1,050
Shellac—						
Orange.....cs	20,241	12,277	16,268	7,461	9,715	8,090
Garnet.....	4,685	4,307	1,237	4,609	2,425	2,096
Button.....	7,242	3,987	4,253	2,443	3,119	2,470
Total.....	3,216,8	20,551	21,728	14,516	15,259	12,656
Sticklac.....cs	1,903	1,268	2,076	1,105	663	212
Turmeric, Bengl. tns	719	349	53	13	88	32
Other kinds.....	557	372	38	35	115	182
Total.....tns	1,276	721	91	48	203	214
Vermilion.....pkgs.	16	11	2	—	2	5
Wax (bees') bls&cs	1,028	290	351	341	519	427
".....cks & cs	1,206	957	791	1,260	601	929
" (Japan).....cs	190	1,325	10	340	290	282

† Net weight.

Trade Reports.

42 CANNON STREET, E.C., April 16.

THERE is not much news to report since last Thursday so far as the market in fine chemicals is concerned. Quinine can be had at a trifling reduction in price. Carbolic acid also seems barely maintained, while foreign tartaric acid is offering at lower rates. Cream of tartar steady, with a slightly better tendency. Refined camphor still drooping. In heavy chemicals also there are no changes of special importance. The drug business has been fairly animated, the articles which have attracted most attention being acacia gums of all varieties, which are rapidly rising in price mainly owing to speculation, and crude camphor, which has been run up about 20s. per cwt. by the syndicate, but now again shows signs of flagging. Cape aloes is about 1s. 6d. dearer on the last sale rates; other varieties are unchanged. Sumatra, and especially Siam, benzoin are higher. For Peru balsam more money is asked, but buchu-leaves have declined. Civet dull of sale. Cubebs remain low in price. Cinchona sold at auction without alteration in value. Cardamoms in better supply and somewhat easier. Colocynth barely maintained. Good dragons'-blood is also lower. Fine coca-leaves are scarce. Ergot of rye still falling. Gamboge also tending easier. Guaiacum is lower, but honey remains firm. Jalap neglected. Ipecacuanha higher for both varieties. Kola-nuts rather lower. Myrrh quiet. Musk unchanged. Castor oil is steady, oris somewhat easier, and orange-peel neglected and in over-supply. Firmer rates are asked for opium. Essential oils without change. Sweet-almond oil tending higher. Menthol very dull of sale. Quicksilver unaltered. Rhubarb quiet. Sarsaparilla in demand, especially for Jamaican. Tinnevely senna steady, Alexandrian higher. Croton-seed again much dearer. Vanilla firmly held, but in slight demand. Beeswax firm, and slightly dearer for Jamaican. In articles allied to the drug-trade there are few changes. Shellac is privately steadier, but at auction garnet was 1s., and second orange 2s., lower. Black and white pepper, arrowroot, and tapioca are dull of sale. Pimento is also quiet. Cochin ginger is flat, Jamaica in good demand. Nutmegs, mace, and chillies remain dull of sale. Zanzibar cloves are quiet. In oils we have to report slightly easier rates for linseed. Rape oil is firm for crude and dearer for refined. Cotton-seed oil slightly higher; refined 16s. to 16s. 6d. Coconut oil somewhat firmer. Palm and olive unchanged. Turpentine better, at 20s. 6d. for American. Petroleum dull and unchanged. The Bank-rate remains 2 per cent. and bar silver has fallen to 30¹⁵/₁₆d. per oz.

Our Bergen correspondent wires on April 16:—"The weather has been decidedly favourable for fishing during last week. The Lofoten season is closing, but Cod-liver Oil in Finmarken a good beginning has been made. Telegram. The total catch of fish amounts to 32,000,000, against 55,600,000 in 1895, and the production of oil on the Norwegian coast to 12,000 barrels, against 14,300. The market is again about 5s. weaker, 210s. per barrel being to-day's quotation for best new non-freezing oil.

Our Hamburg correspondent wires that business in the drug-trade is dull, but all varieties of *Gum arabic* are advancing rapidly. *Camphor* is quiet, refined Hamburg Telegram. bells being on offer at 390m. per kilo. *Cod-liver oil* quiet and unchanged.

Our Smyrna correspondent wires on Wednesday night that numerous reports have been received by local opium-merchants from the growing district to the effect that nine-tenths of the autumn and winter sowings of opium have been destroyed. These reports have caused speculators to become very active, and prices have advanced rapidly. For fair manufacturing opium from 8s. 10d. to 9s. 2d. has been paid. This marks an advance of from 4d. to 8d. per lb.

Our New York correspondent wires on Thursday, April 16 as follows:—"Peruvian balsam is offering at somewhat easier rates, \$1.90 being to day's quotation. Cablegram. Bayberry bark, of which there have been considerable arrivals, is also lowered 5c. There has been a demand for *Truxillo coca-leaves*, which are scarce, at 23s. for good quality. *Newfoundland cod-liver oil* quiet at unchanged quotations. There has been renewed activity in *Oil of Peppermint*, and prices are very firm. *Sassafras oil* is scarce at 42c. per lb. *Jalap* dull. Fair *Vera Cruz* offers at 11c. *Spermacei* firm at 30c. per lb. *Opium* higher at \$2 15 for fair manufacturing."

The kerosenated citronella oil has begun to haunt the public drug-auctions, where it threatens to become a frequent visitor. The first batch rejected by Messrs. Domeier & Co., consisting of four drums, marked P & C, was placed in sale to-day. It was catalogued as "mixed citronella oil," and the broker declared that it contained from 40 to 42 per cent. of kerosene. He was thereupon subjected to several chaffing inquiries as to whether this was a "sale by sample," whether he guaranteed the genuineness of the kerosene, whether he was offering the oil as citronella or as kerosene, and so forth. No one made a bid, and the lot was "bought in."

ACACIA.—There has been a very strong speculative movement in all varieties of acacia gums during the week, and many thousand packages (mostly East Indian) have changed hands at rising prices. It does not seem, however, that so rapid an advance as has taken place is at all warranted, and there is reason to believe that a fairly strong natural position of the article has been cleverly taken advantage of by a firm of brokers and a few dealers to inflate prices far above their genuine values. At auction to-day several parcels of *Soudan sorts* were bought in at from 100s. to 140s. per cwt., according to quality. The last-named price is said to be required for fine soft pale sorts, while it is reported (we know not with what truth) that 120s. per cwt. has actually been paid for fine, and 100s. per cwt. for hard quality. This would show an advance of fully 100 per cent. during the last month. The stock of *Soudan gums* in London, though not accurately known, is believed to be as much as 2,200 to 2,500 packages. Of *Trieste picked gum* 4 cases sold readily to-day at from 6l. 15s. for yellow grain to 8l. 12s. 6d. for fair pale of mixed sizes. For a fine lot 12l. was refused. In *East Indian gums* a large trade has been done, but the quotations are unreliable. *Brown Barbary gum* is said to have been sold at 65s. per cwt. *Senegal gum* is excited, Bas-de fleuve being quoted in Bordeaux at 70s., Galam at 68s. per cwt. The new Galam crop will be due next month. A fair quantity of *Persian gum* offered at auction to-day is held for high prices.

ACID (TARTARIC) offers at easier prices. The English manufacturers' quotation for B.P. is still 1s. 3d., but foreign brands may be had at 13³/₄d. to 1s. 2d. per lb. At to-day's auctions 42 boxes *Cape argol* were sold at from 53s. to 55s. per cwt. for fair grey and pink, and 45s. for dark.

ALOES.—*Cape aloes* has been selling privately at higher rates, and at to-day's auctions an advance of about 1s. 6d. compared with the last sale price was established, 30 out of 32 boxes selling readily, at 25s for good bright, and 22s. to 23s. for partly drossy. *Curaçao* quiet; 126 packages were bought in to-day. Of *Socotrine*, 31 kegs were also bought

in—good brown at 85s., ordinary dull or treacly at from 35s. to 50s. per cwt.

BALSAM (COPAIBA).—Fine quantities were not shown to-day. Ordinary dark-red thin balsam was bought in at 1s. 4d. per lb.

BALSAM (PERU) is dearer. The bulk of the stock is said to have been bought up at somewhat low prices, 7s. 6d. and even 7s. 3d. per lb. is reported to have been accepted for a few cases. Now, however, there is little or nothing available in first hand, and 9s. is asked. At auction to-day 1 case was bought in at 9s. 3d. per lb.

BENZON.—In demand, *Sumatra* being a few shillings dearer. Of 257 packages, 48 sold at 7l. 15s. for good almondy seconds, slightly false packed. 6l. 10s. to 7l. for fair ditto. 6l. to 6l. 5s. for fair almondy centres, brown borders. 5l. 5s. for ordinary thirds. Of *Siam* gum 27 packages were offered, 6 of which sold at an advance of about 1l. for fine quality; small to bold good pale almonds, partly loose, realising 20l. 15s.; small blocky almonds 9l. 7s. 6d.; ordinary hard dull grey black 49s. to 52s. 6d. per cwt. A case of very fine *Penang* almonds in block realised 8l. 7s. 6d. per cwt.

BUCHU.—About $\frac{3}{4}$ d. lower. Large supplies, mostly of good quality, have recently been received, and at auction no fewer than 135 bales were shown, of which 79 sold at 3d. to $3\frac{1}{4}$ d. for fine bright round green. 2d. to $2\frac{1}{4}$ d. for yellow mixed, and $1\frac{1}{4}$ d. per lb. for dull and stalky quality.

CAMPHOR (CRUDE).—On Friday last the article was very neglected, and business was done at 130s., c.i.f., for *Formosan*. Then, however, the syndicate buyers stepped in, and purchased about 3,000 piculs at prices rapidly rising up to 150s. for *Formosan*, April-June and May-June shipment, and from 155s. to 162s. 6d. for *Japanese*. The syndicate then apparently retired, and prices again dropped, *Formosa* camphor being offered, for May-July, at 142s. 6d., c.i.f. It is said that a sale has also been made at 140s., c.i.f., for Hamburg. To-day the market is rather dull, and prices are uncertain. At auction 70 tubs *Japanese* camphor of recent import were offered without reserve, and apparently sold at 165s. per cwt.

CAMPHOR (REFINED).—Still tending lower. *German* bells may be had at 1s. $10\frac{3}{4}$ d. per lb., and one of the English refiners offers half-ton lots at the same price.

CARDAMOMS.—In much better supply and rather easier. Of about 200 packages 180 sold as follows:—*Ceylon-Mysore*, medium to bold, full pale, 2s. 10d. to 3s.; small to medium ditto, 2s. 5d. to 2s. 9d.; medium good brownish, 2s. 1d. to 2s. 3d.; small pale, 1s. 10d. to 1s. 11d.; medium to fair, partly split and specky, 1s. 8d. to 2s. 1d.; ordinary dull brown, 1s. 5d. per lb.; *Ceylon-Malabar*, medium to bold brownish, 2s. 7d. to 2s. 10d.; small to medium good, 2s. 3d. to 2s. 5d.; dull to fair grey and brown, 1s. 8d. to 2s. 1d.; small brown, 1s. 5d. per lb.

CASCARILLA.—At auction 43 packages were offered; siftings were bought in at 40s., fair grey but small bark at 60s. per cwt., nominally. Two bales dark and damaged partly wcoody sold, subject to approval, at 20s. per cwt.

CINCHONA.—The monthly auctions held in London, on Tuesday, were somewhat remarkable for the fact that *Ceylon* bark was entirely wanting. This shows, perhaps better than anything, the degree to which the island is now played out as a bark-producing country. The auctions were moderate in extent, and in no way remarkable for quality of the goods offered. The eight catalogues comprised the following quantities:—

	Packages	Packages
East Indian bark	1,607 of which	1,395 were sold
African cinchona	344 "	344 "
Javan cinchona	248 "	248 "
South American cinchona ..	146 "	73 "
	2,345 "	2,060 "

Competition was by no means animated, although it improved slightly towards the end. There is no change in the unit value, which remains just over $\frac{1}{2}$ d. per lb. The following figures represent the approximate quantities of bark purchased by the principal buyers; but they are, of course, no guide to the amount of quinine represented by the purchase:—

	Lbs.
Agents for the Brunswick factory	121,350
Agents for the Frankfurt and Stuttgart works ..	95,945
Agents for the American and Italian works ..	76,310
Messrs. Howards & Sons	43,964
Agents for the Mannheim and Amsterdam works ..	26,302
Agents for the Imperial Quinine Company ..	8,410
Various buyers	32,309
Total quantity sold	405,204
Bought in or withdrawn	55,262
Total quantity of bark offered	460,466

The following was the range of prices:—Natural *East Indian* bark: *Succirubra* chips and shavings, $\frac{3}{4}$ d. to $1\frac{3}{4}$ d.; *Officinalis* stem chips and shavings, $1\frac{1}{4}$ d. to $2\frac{1}{4}$ d.; good branch chips, 2d.; *Ledger* stem chips, $1\frac{1}{4}$ d. to $2\frac{1}{4}$ d.; *Hybrid* ditto, 2d. per lb. Renewed *East Indian* red chips and shavings, $1\frac{1}{4}$ d. to $2\frac{1}{4}$ d.; ordinary to fine bold mossy druggists' quill, from $3\frac{1}{2}$ d. to 8s. 3d.; *Officinalis* chips and shavings, 2d. to $3\frac{1}{2}$ d.; *Ledger* ditto, $2\frac{1}{4}$ d. to $2\frac{3}{4}$ d., and *Hybrid*, $1\frac{3}{4}$ d. to $2\frac{3}{4}$ d. per lb. *African* bark sold quietly at from $1\frac{1}{4}$ d. to $2\frac{1}{4}$ d. for ordinary broken to fair whole *Succirubra* quill. *Javan* ordinary dusty to good natural *Ledger* chips realised $2\frac{1}{4}$ d. to $3\frac{3}{4}$ d.; branch, $2\frac{1}{4}$ d. to 3d., and root, $1\frac{1}{4}$ d. per lb. *South American* bark: The only parcel sold consisted of 12 bales ordinary cultivated *Bolivian Calisaya* quill at $3\frac{1}{4}$ d., and of 2 bales common *Carthagena* at $1\frac{3}{4}$ d. per lb.

At to-day's auctions two or three interesting parcels were shown. Thirty bales of *Guayaquil*, of good colour and appearance, brought high prices—from 1s. 1d. for good sound to $7\frac{1}{4}$ d. per lb. for broken quill. Of 26 bales *Maracaibo* bark, 13, of fair colour, realised from $6\frac{1}{2}$ d. to 7d. per lb. Thirty serons so-called *Lora* bark, of fair appearance, were bought in at 11d. per lb., 9d. being refused. Fourteen serons *Huanoco* bark sold at 8d. per lb. for fair sound, and from 5d. to 7d. per lb. for damaged quality. The exports of cinchona-bark from Java, in March, amounted to 557,000 Amsterdam lbs.

CIVET.—A new parcel of 4 horns, imported recently from Sydney, was offered to-day, and bought in at 27s. per oz. The quality was poor, so far as appearance goes. Six horns from Marseilles were bought in at 26s. per oz.

COLOCYNTH.—Fair to broken *Spanish* was bought in at 9d. to 1s. 4d. per lb. Three casks good *Turkey* sold at slightly easier rates—good pale at 2s. 4d., partly broken at 2s. 2d. per lb. Another lot was bought in at 2s. 7d. per lb.

CUBERS.—Neglected. Of 65 packages offered to-day 5 bags fair quality without stalk, from Singapore, sold at 32s. 6d. per cwt.

DRAGON'S BLOOD.—Of 31 cases offered to day 2 sold at a decided decline in price, from 7l. 10s. to 7s. 17s. 6d. per cwt. being accepted for bright soft saucer lump.

ERGOT OF RYE.—Very dull of sale, and tending lower. Fifteen bags small wormy *Russian* sold at $5\frac{1}{2}$ d., and 12 packages very common small wormy ergot at from $1\frac{1}{2}$ d. to 2d. per lb. Good *Russian* was bought in at $6\frac{1}{2}$ d.; wormy to good bold sound *Spanish* at from $6\frac{1}{2}$ d. to 10d. per lb.

GALLS.—There has been a fair turnover of Chinese galls amounting in all to 700 cases, both plum and ordinary shape, for arrival, near shipment.

GAMBOGE.—Dull of sale, and tending somewhat easier. A large supply of some 70 cases was offered to-day, but only 4 found buyers at 7l. 5s. for ordinary, partly blocky, broken, ricey, and mixed, and 6l. 5s. for dull, almost colourless, lump.

GUAIACUM.—Much lower. Of 8 packages 4 sold at $11\frac{1}{2}$ d. for medium to 1s. 1d. for good almondy block; fine quality is held for 2s. 10d. per lb.

HONEY is rather firmly held, although no sales were effected at to-day's auctions. Thick brown *Australian* was bought in at 22s., good pure candied *Italian* at 37s., rather ordinary dirty looking *Jamaican* at 34s., clean ambery *Californian* at 35s. per cwt. Nine casks of dull thick brownish *French* honey sold without reserve at 12s. per cwt.

HYDROQUINONE.—The price of Schering's brand for parcels of from 28 lbs. or less has been raised 2d. per lb., but half-cwt. lots remain at 6s. 6d. per lb.

IPECACUANHA.—*Brazilian* root was somewhat easier at to-day's auctions: 56 packages of this kind were shown, and 16 sold, at from 5s. to 5s. 5d. per lb. for fair to good

annulated, and at from 4s. 7d. (subject) to 5s. 4d. per lb. for ordinary to good stout, slightly damaged. A parcel of 10 bales very badly damaged *ipecacuanha* (salvage from a recently-wrecked vessel) sold as "roots" at 5s. per cwt. There has recently been an arrival of about 40 bales of Rio root, part of which was placed in sale to-day; and this accounts, perhaps, for the easier tendency of the drug. *Cartagena* root is also easier: of 30 packages, 1 (second-class damaged) sold at 4s. 3d. per lb.

JALAP.—Quiet. Twenty-two bales fair *Vera Cruz* of mixed sizes were offered and bought in at 8d. to 9d. per lb.

KINO.—One 52-lb. case of recently-imported *East Indian kino* was shown to-day. Although apparently genuine it was sold only as "gum." Bidding began at 5s., and ran up to 12s. 6d. per lb., but the lot was bought in at the nominal figure of 20s. per lb.

KOLA.—In large supply and tending lower. There are very few offers in the market at present, and the only sale made to-day, out of about 80 packages of dried nuts, was one at 1s. per lb. for 2 packages fine bright; 10 bags fresh kola-nuts were bought in at 7d. per lb., a bid of 4 $\frac{3}{4}$ d. per lb. being refused.

MERCURIALS.—Below is the revised price-list of mercurials established by the English manufacturers on April 9, and referred to in our last issue:—

	Small wholesale quantities.	Assorted lots of not less than		
		56 lbs. to 224 lbs.	224 lbs. to 560 lbs.	560 lbs. to 1120 lbs.
Hydrarg. b'chlor. . . .	per lb.	2 4	2 2	2 1
" chlorid. . . .	"	2 8	2 6	2 5
" nit. oxyd. . . .	"	3 0	2 10	2 9
" " levig. . . .	"	3 0	2 10	2 9
" oxyd. flav. . . .	"	3 1	2 11	2 10
" precip. alb. . . .	"	3 1	2 11	2 10
" sulph. alb. . . .	"	2 1	1 11	1 10
" nig. . . .	"	2 0	1 10	1 9

MUSK.—It is reported that a fair business has been done in fine blue-skinned *Tonguin* pods at full prices, but at auction there was no sign of animation in the article. Ten caddies first-pile pods were bought in at 72s. 6d. to 80s. for small to bold, well-trimmed, blue and brown skin, mixed to ditto fine blue skin; 7 caddies ordinary old-fashioned damp and skinny, at 30s. per oz. Three bottles fair *Nepaul* grain musk were bought in at 45s. per oz. (privately 42s. 6d. per oz. is said to have been accepted), and musk trimmings sold at 3d. per oz. With regard to the opinion which is often expressed that the continued hunting of the musk-deer is likely in the near future, to lead to the extermination of the animals, a foreign official report states that in many of the mountain districts in which the musk-deer is indigenous measures for its preservation are strictly enforced. Moreover, the musk-deer is found in large numbers in parts of Thibet, Burmah, and Tong-king, in which up to the present no hunting has taken place.

NUX VOMICA.—Prices remain low. Good bright seed from Bombay was bought in at 10s. per cwt., and 86 bags dull grey seed from Madras realised from 4s. 6d. to 5s. 6d. per cwt.

OIL (ALMOND) is tending higher. Some of the English drawers have raised their quotation for sweet peach kernel oil to 10d., while sweet oil of almonds is still quoted according to quality, from 1s. to 1s. 3d. per lb.

OIL (CASTOR).—It is said that the acreage under castor beans in Italy has been very much reduced owing to the low prices obtained for the crop lately. The market is now much firmer, and a long period of higher rates is anticipated. At present finest medicinal oil still offers at 30s. 6d. to 31s. 6d. per cwt., c. i. f. terms.

OIL (COD-LIVER) has been very quiet this week, and prices are tending slightly easier. At auction nothing was offered.

OILS (ESSENTIAL).—*American peppermint* oil slow of sale; H.G.H. might probably be had now as low as 9s. 1 $\frac{1}{2}$ d. per lb. For *Japanese* 40-per-cent. oil 6s. 6d. per lb. is asked; while *Dementholised* offers at 5s. per lb. *Star anise* oil maintains its price of 10s. 3d., but the demand is dull. *Citronella* offers 1s. 7d. per lb. on the spot, which is easier. At auction

to-day 10 cases colourless refined *Japanese camphor oil* were shown. They are held for 47s. 6d. per cwt. Several parcels of *Eucalyptus oil* were bought in—"Cygnat" brand at 1s. 9d. per lb. Two cases of 29 bottles each *Pimento oil*, market "Pimento, English," salvage from the *Missouri*, sold at 3s. 5d. per lb.; and 10 cases *Sandalwood oil* from *Mangalore* were bought in at 10s. per lb.

OPIUM.—The London market has a firmer tone, but there has not been much business since our last report. For good *Druggists' gum* a bid of 9s. per lb. is said to have been refused, 9s. 6d. per lb. being required. Small sales of fine *Persian bricks* have been made at 13s. per lb. Some fine *Soft shipping opium* was offering yesterday at 12s. 6d. per lb., but the owner has now raised his price to 13s. per lb. At auction to-day 10 cases of *Druggists' opium* (salvage) sold, "with all faults," at good prices—viz., 7s. 3d. to 7s. 4d. per lb. A case of so-called "powdered opium" (believed to be really hashish), imported in 1890, was offered and bought in, as no one would bid for it.

ORRIS.—*East Indian* root is in large supply, 183 packages of this variety being offered. They were all bought in at 35s. or thereabouts. Of *Italian orris* 15 bags good pale *Florentine* were bought in at 70s., and 3 bags yellowish mixed sold at 52s. 6d., while a cask of fair palish only realised 44s. without reserve. This shows a lower range of prices.

QUICKSILVER.—Very dull of sale, at 6l. 17s. 6d. from the importers, and about 1s. less from second-hand holders.

QUININE.—Very slow of sale, and rather easier, there being now sellers of good brands second-hand German bulk at 12 $\frac{1}{2}$ d., but no buyers above 12 $\frac{3}{4}$ d. per oz.

RHUBARB.—Very dull of sale. Of 166 cases 35 sold as follows:—*Shensi*, fine medium to bold round, pinky fracture, 2s. 4d.; fair medium to bold flat ditto, 1s. 5d.; medium ordinary, grey fracture, round, 10 $\frac{1}{2}$ d. to 1s. 1d. *Canton*, fair rather dull fracture, small, to good medium, fair fracture, 10d. to 1s. 2d. High-dried, dull coat, slightly wormy medium flat, 8 $\frac{1}{2}$ d. to 9d.; good ditto, 10 $\frac{1}{2}$ d. per lb. An official report from China states that the demand for rhubarb appears to be on the decrease, and that, with few exceptions, the Shanghai exporters have lately been losing money over the drug. The finest "Shensi" rhubarb has not been seen in the Shanghai market for many years. About two-thirds of the rhubarb brought to market in Shanghai is consumed in China and Japan, the rest goes mainly to England.

SARSAPARILLA.—In good request. No genuine *Jamaican* was offered, and it is said that the whole of the first-hand supply has been bought up. Of *Honduras* root 23 serons were offered, and 4 sold at 1s. to 1s. 1d. per lb. for fair damaged. Of 36 bales fair *Lima-Jamaican* 20 sold at 11d. to 12d. per lb. for damaged quality. Fifteen bales damaged *Guayaquil* realised 8d. to 10d. per lb. For fine *Native Jamaican* 1s. 3d. per lb. was paid.

SEEDS (VARIOUS).—Five bags fair *arcea* sold at 12s. 6d. per cwt. For fair *Spanish anise* 30s. per cwt. was paid ordinary Russian sold at 17s. 6d. to 19s. per cwt. *Annatto* in large supply. For good bright W. Indian 4d. per lb. was refused. Fair to ordinary dull Ceylon realised from 2d. down to 1 $\frac{1}{2}$ d. per lb. *Croton-seed* is again dearer; 10 bags dark mixed Ceylon realised 65s. per cwt. Fifty bags Turkish *fennel* seed brought 16s. 6d. per cwt. Fourteen cases common broken damaged *star anise*, without aroma, were bought in at 25s. per cwt.

SENNA.—*Alexandrian* senna remains in strong demand. The bulk of the 37 packages offered to-day was bought in, being held for very high rates, but a few lots sold at a distinct advance, good whole leaf realising 12 $\frac{3}{4}$ d. per lb. A case of pale pods sold for 6 $\frac{3}{4}$ d. per lb. Broken leaf has been sold privately at 7d. per lb. *Tinnevely* senna is steady, and nearly the whole of this week's supply of 239 bales found buyers at full prices: common to medium yellowish specky at 1d. to 2d., fair greenish at 2 $\frac{1}{2}$ d. to 2 $\frac{3}{4}$ d., good at 3 $\frac{1}{2}$ d. to 4d. per lb.

VARIOUS DRUGS.—The following particulars refer to parcels of drugs of minor interest at to-day's auctions:—*Birdlime*: Four cases *Japanese* sold at 6d. per lb.; for four others that price was refused. *Cassia fistula* is scarce,

14 baskets common wormy thin *East Indian* pods realising 17s. to 17s. 6d. per cwt. *Calumba* dull of sale; 43 bags dark sorts were bought in at 9s. per lb. *Cinella alba*: For 3 bales, broken to fair pale, 22s. per cwt. was paid. *Cantharides* quite neglected; 1s. is asked for good, and 11d. for small *Chinese*. *Cannabis indica* all bought in at 2d. to 3½d. for stalky to fair tops. *Cocculus indicus* limited at 8s. per cwt. *Chiretta*: For 37 bales fair quality 2½d. per lb. is asked. *Kamala*: Five cases good sifted were bought in at 9d. per lb., low dark at 5d. per lb. Three bales Japanese *Loofahs* were shown and bought in; from 1d. to 1½d. per loofah was wanted for them. Six bales small dusty *Lavender* flowers sold cheaply at 10s. per cwt., and 4 cases *Guarana* were bought in. Five barrels *Lime-juice* mixed with sediment realised 1s. per gallon, and 22 cases *Gum mastic* were bought in at from 1s. 6d. to 1s. 8d. *Myrrh* quite neglected; for fair native picked 77s. 6d. was refused, and one bag of dust sold at 30s. per cwt. *Orange peel* was in very large supply, but extremely neglected; only 11 packages sold, without reserve, at from 2½d. to 4d. per lb. for fair *Malta*; for good quality 7d. to 8d. per lb. is asked. *Menthol* neglected; *Rapes* brand was bought in at 12s. 3d., *Cocking's* at 16s. per lb. *Squills* in considerable supply; only a few boxes yellow sold at 1½d. per lb. *Tamarinds*: The new *West Indian* crop is now being offered freely. At auction a few lots sold at 17s. for fair bright *Barbados*. *East Indian* was bought in at 10s. 6d. per cwt. *Tonca beans* quiet; for good frosted *Para* the price is from 2s. to 2s. 6d., ordinary foxy to black 9d. to 1s. 4d. per lb. Seventeen bundles *Sandalwood* from Bombay realised 40s. per ton, "without reserve." Five cases very dusty brown *Patchouli-leaves*, not stalky, from Penang, were catalogued, but not actually offered. Three tons good *Quassia chips* were bought in at 11l 10s. per ton; logs at 95s. per ton.

WAX (BEES).—Very firm all round, and slightly dearer for *Jamaican*, of which 32 packages sold readily at from 8l. to 8l. 10s. per cwt. for fair brown mixed to good orange and yellow. Of *Australian wax*, 4 bags mixed colours sold at 7l. 2s. 6d. to 7l. 7s. 6d. Four cases greenish-brown *Madras* sold, "subject," at 6l. 2s. 6d., and 7 barrels *San Domingan* at 6l. 7s. 6d. per cwt. For mixed *Bombay wax* 6l. 12s. 6d. per cwt. was also paid, while orange *Italian*, fair *Natal*, and *Madagascar*, all realised 6l. 15s. per cwt.

WAX (JAPAN) dearer. For good hard pale squares 37s. 6d. has been paid on the spot. The stock is small. At auction 15 cases were held from 38s. to 40s. per cwt.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on April 15, says that *Castor oil* is steady at 2½d. for good seconds *Calcutta*, and 2½d. for *First-pressure French*. *Madras* is held for the latter price also. *Kola nuts* have been arriving freely, but the market has been readily cleared, at prices ranging from 4d. to 4½d. per lb., and now no more offer at the moment. *Souidan descriptions of acacia* are very firm in tendency, shippers placing extreme limits on their holdings of Arabic sorts, and business is restricted thereby. A large business has been done in *Niger gums* at advancing prices on private terms. *Cream of tartar* shows signs of steadying on the spot, in consequence of better reports from abroad; 95s. per cwt. is asked for first white. *Calabar beans*, after remaining in a stagnant condition for some time, have moved off slowly at 1½d. per lb. for moderate-sized parcels. *African ginger* is easier at 21s. per cwt., and perhaps this price might be shaded if orders came for quantity. Further sales of ordinary *Sierra Leone chillies* have been made at 32s. 6d.

The American Market.

Our New York correspondent writes "on April 8:—During the past week the drug and chemical market ruled quiet, transactions being almost exclusively of a hand-to-mouth character. *Curaçao aloes* continue in a strong position, no further lots having arrived. All grades of *Balsam copaiba* rule strong, the arrivals being thus far far below the average of past years, and supplies in dealers' hands limited. Unless the scarcity is relieved by fresh large importations, a higher market is assured in the near future. *Balsam Peru* is scarce, \$2 being the quotation. *Balsam tolu*: Six cases have arrived, no quotation; but one of the leading houses

quotes 17c., although probably 14c. would be accepted on a firm bid. *Angostura bark* is slightly higher, in sympathy with the reduced supplies, 5½c. being quoted. *Bayberry bark*, new crop, is arriving; 6c. would prove a trading-basis. *Cascara sagrada* firmly held, but no important demand obtains. *Sassafras bark* is [quotably] lower, at 8c. for good quality; gathering is now proceeding. *Gum chicle* is reduced 2c., 35c. being the selling-price. *Nonfoundland cod-liver oil* is not inquired for so freely; prices are unchanged, however. Prime is quoted at \$1.25 per American gallon, and good quality at \$1 per gallon. Stocks are light. *Cotton seed oil* seems to interest buyers to a more appreciable extent than formerly. Prices rule low. *Peppermint oil*: All grades are without change, with limited inquiry. *Oil sassafras*: Several large lots changed hands in the market. The article is scarce in the country; 40c. per lb. is now best price. *Jalap-root* sells at 10c. from first hands. *Mexican sarsaparilla* is neglected. *Senega-root* uninteresting. *Bees-wax*: The market is slightly easier, owing to the stocks offered within the past few days. *Opium* without change. *Spermaceti* unchanged at 32c., with light demand.

The Hamburg Drug-market.

Our Hamburg correspondent writes on April 14:—"Business still continues very quiet here, and there is not much doing in the drug-trade at present. *Antimony* is quiet at last week's prices; crude at 33m., regulus at 68m. to 67m. per 100 kilos. *Arsenic* is unchanged; white refined, in lumps, 45m. to 46m., yellow 46m. to 47m. per 100 kilos. *Acid (citric)* unaltered; best English 255m. to 257m. per 100 kilos. *Acid (carbolic)* very firmly held at 165m. to 175m. per 100 kilos. *Acid (tartaric)* a shade easier at 265m. to 275m. per 100 kilos. *Balsam copaiba* is entirely unchanged at 2.60m. to 3.10m. per kilo. *Balsam Peru* is somewhat lower at 15½m. per kilo. *Camphor (refined)* is very quiet and favours buyers. The refiners ask 405m., while there are second-hand sellers at 390m. per 100 kilos. *Chlorate of potash* is steady at 86m. per 100 kilos. *Cantharides* quiet, prime Russian offering at 425m. per 100 kilos. *Cardamoms* are firm; Malabar in good demand. *Cinnamon* is very firm. *Cassia lignea* a little easier at 62m. to 64m.; broken cassia steady. *Cumin seed* quiet, Malta 54m., Mogadore 54m. per 100 kilos. *Cod-liver oil* does not show much business; 1895 non-congealing oil is scarce at 200m., 1896 200m. per barrel. *Fenugreek seed* steady at 13m. to 14m. per 100 kilos. *Gum acacia* is still advancing, and owners hold very firm. *Glycerine* shows a fair demand at unchanged prices. *Oils (essential)*: *Peppermint oil*, HGH, is quiet at 9m. per lb.; *Japanese* at 11½m. per kilo. *Citronella oil* is much easier; spot 3.65m. per kilo. *Star-anise oil* is firmly held at 23m. to 22½m. per kilo. *Quinine* without demand; to-day's price is 39m. to 40m. per kilo. *Shellac* does not show much business, second orange TN offering at 210m., AC garnet at 190m. per 100 kilos. *Sugar of milk* is steady at 155m. per 100 kilos.

The Smyrna and Constantinople Opium Markets.

Our Smyrna correspondent writes on April 9:—"Our opium market has been very quiet since our last report of March 31, the only business done being a few cases of fine Yerli talequale at the equivalent of 8s. 4d. per lb., f.o.b. The reports from the interior are daily confirming the damage caused by frost to the growing crop; it is now estimated to be over 60 per cent. We have had, however, since last week, very beneficial rain and fine weather for the spring sowings.

THE METRIC SYSTEM.—Mr. Arnold Forster intends on Monday next to ask the First Lord of the Treasury, whether, in view of the fact that the Metric System of weights and measures has recently been adopted by Turkey, Russia, and Japan, and is now in use in all the civilised countries in the world with the exception of the British Empire and the United States of America, and in view of the fact that metric measurements have already been adapted with respect to the ton and for all purposes of pharmaceutical dispensing in the United States, Her Majesty's Government will take immediate steps to give effect to the practically unanimous recommendation of the Committee on the Metric System, with the object of placing this country on a level with other civilised nations in the matter of weights and measures.

Price-list of Heavy Chemicals, Oils, &c.

THE following are the current wholesale market quotations of heavy chemicals, coal-tar products, and oils not specially enumerated in other parts of the Trade-report.

Articles	Price, April 16, 1896
ACID—	£ s. d.
Acetic, sp. gr. 1040 (from acetate of soda) .. per ton	17 0 0
25 per cent. (from acetate of lime)	6 15 0
Boric, crystals per cwt.	1 9 0
Powder	1 10 0
Carbolic, crystals, 34°–35° C. per lb.	0 0 7
39°–40° C.	0 0 7½
Crude, 60 per cent. per gall.	0 2 1
75 per cent.	0 2 4½
Liquefied	0 0 11
Cresylic	0 1 2
Citric, B.P. per lb.	0 0 3½
Oxalic	0 0 11
Picric, crystals	0 1 3
Tartaric, B.P.	4 10 0
ALKALI—	4 15 0
White, 48 per cent per ton	5 0 0
50 per cent.	4 12 6
52 per cent.	5 7 6
ALUM—	1 17 6
Lump, in casks per cwt.	3 17 6
Ground, in bags	4 0 0
ALUMINA—	0 0 3½
Carbonate per lb.	1 5 0
Sulphate, pure white lumps per cwt.	1 10 0
Crushed	1 19 0
AMMONIA—	1 17 6
Carbonate per lb.	8 0 0
Muriate, white per cwt.	8 0 0
Grey	8 0 0
Sal ammoniac, first white	8 0 0
Second	8 0 0
Sulphate, Leith per ton	7 17 6
Hull	7 17 6
Liverpool	7 17 6
Beckton	7 17 6
ANILINE—	0 0 7½
Oil per lb.	0 0 6½
Salt	0 0 10½
ANTHRACENE—	0 0 9½
A grade per unit	28 0 0
B grade	24 0 0
ARSENIC—	8 10 0
Lump, best white per ton	4 0 0
Powder, best white	6 10 0
BARIUM—	7 5 0
Carbonate precipitated	4 0 0
Mineral	6 10 0
Chloride calcined	7 5 0
Crystals	4 15 0
Sulphide	7 0 0
Sulphate (blanc fixe)	0 2 0
BENZOL—	0 1 8
90 per cent. per gall.	7 0 0
50–90 per cent.	7 5 0
BLEACHING-POWDER—	3 15 0
Hardwood casks per ton	6 2 6
Softwood casks	18 15 0
CAKE—	0 0 1½
Cottonseed	0 0 1½
Linseed	0 0 1½
COPPER—	23 0 0
Sulphate (Anchor)	16 0 0
CREASOTE OIL—	19 5 0
Filtered per gall.	6 0 0
Ordinary liquid	8 10 0
IRON SULPHATE—	25 0 0
(Green copperas) Lancashire per ton	1 15 0
Welsh	1 14 0
LEAD—	1 17 6
Acetate, white per cwt.	4 0 0
Brown	0 0 9
Nitrate	0 1 4
LIME—	0 1 3
Acetate, brown	0 1 1½
Grey	0 3 6
Carbide (acetate of calcium)	0 3 0
MAGNESIUM—	—
Carbonate per lb.	—
Sulphate (Epsom salts)	—
NAPHTHA—	—
Coal-tar, crude, 30 p. c., at 120° C. per gall.	—
Solvent, 90 p. c., at 160° C.	—
95 p. c., at 160° C.	—
90 p. c., at 190° C.	—
Wood, Miscible, 60 o.p.	—
Solvent	—
NAPHTHALINE-BALLS—	—
English per lb.	—

Articles	Price, April 13, 1896
OILS—	£ s. d.
Castor, first Calcutta per lb.	0 0 3½
Second	0 0 2½
Madras	—
First pressings, French per ton	21 10 0
Second	20 10 0
Cocoonut, Ceylon per cwt.	1 3 0
Cochin	1 7 0
Cottonseed, crude	0 14 7½
Refined, Liverpool	0 16 6
American	0 16 0
Linseed	0 18 7½
Olive, Spanish per tun	29 0 0
Syrian	29 0 0
Moroccan	31 10 0
Candiot	19 10 0
Palm, Lagos per ton	1 1 0
Cameroons, &c.	—
Petroleum, Amer. ord. good per gall.	0 0 5½
Water-white	0 0 6½
Russian	0 0 5½
Rape, crude per cwt.	1 2 6
Refined	1 4 0
Jamba	1 1 6
Ravison	0 17 6
PHOSPHORUS—	0 2 0
Wedges per lb.	0 2 1
Sticks	1 13 0
PITCH—	—
POTASSIUM—	—
Bichromate, English and Scotch deliveries per lb.	0 0 4½
Export	0 0 4½
Chlorate	0 0 4½
Nitrate saltpetre, casks per cwt.	1 1 9
ditto kegs	1 2 9
Prussiate, yellow per lb.	0 0 7½
SODIUM—	2 5 0
Aluminate per cwt.	0 19 6
Borate (borax) crystals	1 0 6
Powdered	0 0 3½
Bichromate, English and Scotch deliveries per lb.	0 0 3½
Export	0 0 3½
Bicarbonate per ton	6 5 0
Carbonate, caustic soda ash	4 5 0
Carbonated	4 0 0
Alkali, 52 per cent.	3 12 6
Soda crystals	2 2 6
Chlorate per lb.	0 0 6½
Hydrate, 77 p. c. caustic soda per ton	9 5 0
74 per cent.	8 7 6
70 per cent.	7 10 0
60 per cent.	6 10 0
60 per cent. cream	6 10 0
Hyposulphite, casks, ½-cwt.	5 17 6
Kegs, 1-cwt.	6 7 6
Nitrate per cwt.	0 8 0
Phosphate per ton	15 0 0
Silicate, 75° Tw.	2 12 6
100°	3 5 0
140°	3 15 0
Green lump	4 7 6
Brown	4 10 0
Sulphate, saltcake	1 5 0
SOUTH DURHAM SALT—	0 9 6
Common	0 15 0
Blocks	—
SULPHOCYANIDES—	—
Ammonium per lb.	0 0 6½
Barium	0 0 4½
Potassium	0 0 7
SULPHUR—	3 16 3
Recovered per ton	5 0 0
Roll	5 0 0
Flower	5 5 0
TAR—	0 10 6
Refined per barrel	—
TARTAR, CREAM OF—	—
Crystals per cwt.	4 10 0
Powdered	4 13 0
TOLUOL—	0 1 5½
Pure per gall.	—
TURPENTINE—	—
American spirits per cwt.	1 0 6
ZINC—Sulphate per ton	6 15 0

† Denotes f.o.b. Tyne.

‡ Denotes f.o.b. Liverpool.

‡ Denotes f.o.b. Glasgow.

* Denotes f.o.b. Tees.

INDELIBLE INKS FOR LABELLING GLASSWARE, METAL, &c.—Black: Sodium silicate, 1 to 2 parts; liquid Indian ink, 1 part. White: Sodium silicate, 3 to 4 parts; Chinese white (Winsor & Newton's), 1 part. Barium sulphate may be used instead of Chinese white, in the same proportion. The editor of the *National Druggist* adds that he has long used Indian ink in silicate-of-sodium solution for marking microscope-slides, &c.



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications, with, if desired, a distinctive nom-de-plume.

Laudanum-drinkers.

SIR,—*Re* the "opium habit," some years ago I was assistant with a firm of chemists in a Midland manufacturing town, and we had there a woman who was a constant customer for tinct. opii. She would come in for from $\frac{1}{2}$ to 1 oz. and drink it off in the shop, neat, once or twice a day, and I have known her toss off $1\frac{1}{2}$ oz. If she was short of cash and could not muster the 6d. for the ounce of pure tincture, she would take the methylated article, which was kept and retailed at 4d. per oz. in spite of the Excise officers, who, I fancy, must have taken things pretty easily there.

Yours faithfully,
DEVONSHIRE. (52/6.)

Guaiacal Carbonate.

SIR,—This drug seems destined to drive doctors and dispensers to despair, but some of your correspondents seem to have gone out of their way in misreading the Liverpool prescription. It is a great pity so many prescribers will not take the trouble to write in such a way as to leave no possibility of doubt as to their intention. Only the other day we heard of a case in which tinct. guaiaci ammon was dispensed for tinct. quiniæ ammon. owing to careless writing on the part of the prescriber. The first prescription we ever had for guaiacal carbonate was one of this unsatisfactory character, and coming, as it did, at a time when the drug was scarcely known in this country, it formed somewhat of a puzzle. It was prescribed by a German physician practising in Gower Street, and was written so that one who did not know German characters would have read it "gucciac carb. gr. v. n. et. m."

Yours truly,
H & Co. (54/7)

The Pharmaceutical Society of Ireland and Medals.

SIR,—With reference to a proposal considered some time ago by the Pharmaceutical Society of Ireland to award medals at their Licence examinations, I should like to make one or two suggestions, now that the scheme is to be finally adopted.

I am of opinion that the medals should be awarded only to candidates who have taken the highest places on first trial at an examination held within a limited period following the completion of their apprenticeship. Such a course would give meritorious students a fair advantage over "chronics," who through repeated failures have at length become familiar with their work, and over others not "chronics," who have allowed a long time to intervene between the close of their apprenticeship and the date of going up for examination.

I am also of opinion that the Society should adopt the system of awarding "honours" at their Licence examination. This could be effected by making three divisions—first-class honours, second class-honours, and a pass only to those who have obtained respectively 85 per cent., 70 per cent., and 55 per cent. of the maximum marks.

Of course, if a "chronic" should obtain, for instance, first in first honours, this fact should be duly mentioned in his certificate; but, per rule, he would be ineligible for a medal, which could, in that case, be withheld altogether, or

awarded, if sufficient merit were shown, to the next eligible candidate.

Dublin, April 13.

Yours, &c.,

N. R. G. (54/90.)

To Increase Incomes.

SIR,—Many remedies have been proposed for a state of affairs that is becoming unbearable, but we don't seem to be getting any better times. And so, with your kind permission, I will endeavour to point out one more. I do not profess that this is the only way the chemist can save himself or that it is so infallible that all he has to do is to smell the cork twice and then go and write a testimonial showing how complete the cure is; but I do think it would work.

The first thing to do is to ascertain our present position because until we know exactly where we are it is no use taking a fresh departure. To prattle about curriculum and higher education and things of that sort is not only useless but mischievous, because it tends to make the chemist think he is a professional man and other nonsense of a like nature. Would any professional man sell 7d. whitening for 2½d. if you took your own bucket, or one penn'orth of chlorid lime five minutes after sitting down to dinner, or fill such an order as penn'orth of 'air oil and mother says be sure you put some nice scent in it, or sell two cakes of Pears' Soap for 6½d. when the cheapest he can buy it for is 4s. per dozen less 20 per cent. and plus freight? That is what the chemist has to do. Higher education is very nice and proper no doubt, and so is being able to play the piano, but one is as unnecessary for the chemist as the other. The education required to pass the "Minor" even is more than is required. The man with higher education can take his wares to better markets. Sir Henry Roscoe may be taken as a man with a "higher education," but could he as a chemist's assistant get more than 2l. 2s. per week or as a master chemist get 5s. for dispensing a dozen pills?

Is any assistance to be got from the law, and if it is obtained will it be of any use?

We may perhaps get carbolic acid put in the schedule and possibly get it made illegal for a company to sell poisons, but will that shut up John Jones, M.P.S., who is selling Cockle's Pills for 10½d. and 8-oz. mixtures for 4d.? Poor John would no doubt be willing to sell for 1s. 1½d. and 1s. 6d. if he could, and so perhaps he is not so much to be blamed as pitied, but he is a "blackleg" all the same and so is the chemist who eats the stores' bread.

The Irish Society is able to obtain convictions against unregistered men who compound physicians' prescriptions, and it is important that the same privileges should be obtained in England, but it is useless to expect it to be made illegal for unregistered traders to sell Epsom salts, even though you can commit suicide therewith, or bedpans or feeding-bottles.

The chemist has no right to complain of the stores taking his trade in brushes and sponges and perfumery, and he will get no sympathy on this head, nor need he expect to have the monopoly of that large class of goods known as druggists' sundries, for it is ridiculous to assert that a chemist can sell a clinical thermometer better than a grocer, although he will have the preference so long as his prices are not higher than other people's. C.A.M.W.A.L. have shown us the way out of our troubles, and it is really their idea and not mine that is the base of my remedy. Chemists, as a body, should bring pressure to bear upon the Pharmaceutical Society to compel them to do all in their power to get the law altered so that it shall be illegal for anyone not registered as a chemist or a doctor to compound physicians' prescriptions and to sell scheduled poisons, and to make it as impossible for a company to act as chemists as it is for them to practise as doctors. They cannot be expected to do more than that. For the rest the chemist must depend upon himself, always bearing in mind that although it is easy to break a faggot stick by stick it is not easy to break it as a whole.

Following the C.A.M.W.A.L. plan, a company should be formed every shareholder in which should be a registered chemist. This company could go into the market and buy at rates that would enable it to sell drugs and sundries to its shareholders at rates that would knock the ordinary wholesale prices into a cocked hat, and any small profit that was left

over would be distributed as dividend. It would invite the proprietors of great and successful patent medicines to bind themselves to sell to them alone, and in the event of their declining would put up a similar preparation and leave the original severely alone, which of course means that the whole body of chemists would not handle it. It would put up perfumes and other sundries of a quality and style that might be calculated to earn a good reputation and which could only be obtained at the chemists'. And so on all down the line. Our friend John Jones, M.P.S., and other "black-legs" would not be shareholders in this company until they had ceased being "blacklegs."

This of course is trade-unionism pure and simple. But is trade-unionism a thing to be ashamed of? Are we to think less of the engineers and other working men or of the gentlemen and capitalists forming the Salt Trust or the Iodine Convention because in their battle with the world they have used modern weapons and have been able to better their position thereby? Why, the very curates are trying to establish a union, and why should the chemist stand aloof and see his business slipping from him when if he will but come out of his shell and look round and profit by the experience of others, he can, even at the eleventh hour, earn an honest and honourable living?

Even the Pharmaceutical Society and those who have higher education could be provided for; the former as the guardian of the legal rights of the trade, and the latter as experts in the service of the company pitting their knowledge and their wits against those of the outsiders, and so proving the truth of the old saw that "knowledge is power."

There is yet one more way in which the individual chemist can help the trade as a whole. There are far too many of us. It would hardly be right to ask, say, 50 per cent. to go and hang themselves, but it is in the power of each and all of us to decline to take apprentices.

JAPAN. (252/43.)

LEGAL QUERIES.

Immediate information on pharmaco-legal matters is available in "Pharmacy and Poison Laws of the United Kingdom," Alpe's "Handy-book of Medicine-stamp Duty," and THE CHEMISTS' AND DRUGGISTS' DIARY.

49/33. *V. S.*—You may call yourself a veterinary chemist. See *C. & D.*, June 3, 1893.

50/17. *Fiat Justitia.*—We cannot take up your grievance. You prejudice your case by the unnecessarily strong language you use.

46/44. *Carboxyl.*—A chemist who prescribes and supplies such medicines as that of which you quote the formula is undertaking a very risky business, and may very easily overstep the line which separates his proper business from criminal conduct.

51/5. *Neon.*—If instead of writing a long letter to show that we do not understand the Pharmacy Act you would get a copy of it, or of our "Pharmacy and Poison Laws," you would perhaps appreciate the distinction between the "seller" under the 15th and under the 17th sections of the Act.

50/69. *W. F. G.*—It is no use to ask us whether we think the Veterinary College will trouble you in regard to the descriptions you propose to use. We are quite unable to say what they will do. We do not ourselves think it is an infringement of the Veterinary Surgeons Act to announce that you are prepared to treat animals surgically and medically, and if you were summoned for using such a description, and defended the case properly, we think you would win. But it must not be forgotten that the College has put forward extravagant claims, and that one of these (objecting to the title veterinary forge) was admitted by the High Court—in our opinion an unjust decision. The address

of the Unregistered Dental Practitioners' Association is 6 King Street, Oldham.

53/71. *Subscriber.*—We do not see how the Council of the Pharmaceutical Society of Ireland can accept the certificate of apprenticeship to a limited company from a candidate for registered druggist's examination. The judgment in the Cleland case must apply to these certificates as much as to those of candidates for the pharmaceutical examination. We are informed that no such certificates have been accepted.

54/5. *Stamen.*—See answer to "Carboxyl."

46/35. *Country Cousin* (whose letter-paper describes him as a chemist and dentist) asks how many hours a day can he legally employ a boy of 13 to run errands and do odd jobs, and does a shop come under the Factory Act? [If he is a mechanical dentist his place of business would probably come under the description of a workshop in the Factory Act of 1878, and the boy could only work half-time, and a certificate of fitness would be required. An ordinary chemist's shop would not come under the Factory Act. Under the Shop-hours Act, 1892, the boy cannot be employed for more than seventy-four hours, including meal-times, in any one week. This Act applies to all shops. The bringing of this boy into the business causes one or other of the Acts to apply. It is only where the persons employed are members of the same family, dwelling in the building of which the shop forms part or to which the shop is attached, that the Shop-hours Act does not apply.]

51/69. *Inquirer* asks if he registers a label with a design, and that same design is enlarged as a showcard, would it be necessary to register the showcard also? The design in question is a picture, and as a showcard would there be protection if registered at Stationers' Hall? [He does not say in what manner the label has been registered, but it is immaterial for this purpose whether registered under the Trade-marks Acts or under the Fine Arts Copyright Act. An enlargement or diminution of the original picture is just as much an infringement as a copy of the same size, so that the showcard need not be re-registered. Before any action can be taken for infringement of copyright a picture must be registered at Stationers' Hall in the same manner as for the copyright of a book. But unless the label is an original painting, drawing, or photograph, it is not capable of such registration, but, of course, may be registered as a trademark.]

54/71. *A. P. S.*—Your unqualified partner would be liable to a penalty if the firm keep open shop for the sale of poisons, however you describe yourselves.

53/36. *G. S.*—If your coca wine is really as you say, non-excisable, that is what the Board of Inland Revenue would consider medicinal, the label you send us would necessitate the use of a medicine stamp. But we do not think (from your label) it would be medicinally strong enough to be regarded as non-excisable. In that case it can only be sold by a person holding a wine-licence, and would not require a medicine-stamp.

54/22. *J. B.*—If the tax you paid at the beginning of 1895 was in respect of Schedule A, it is payable by the landlord; if Schedule D, it is upon your business-profits, and you cannot now claim repayment on the ground that you were not liable to pay. You should have ascertained your profits and appealed at the end of the financial year 1894-95. See "How to Recover Income-tax" in THE CHEMISTS' AND DRUGGISTS' DIARY, 1895.

57/4. *H. R.*—It is illegal to offer, or expose for sale, or to sell any grain, seed, or meal which has been so steeped, or dipped in, or mixed with poison as to be poisonous. But

the sale of any solution or infusion, or of any material or ingredient for dressing, protecting, or preparing any grain or seed for *bonâ-fide* use in agriculture only is expressly permitted.

56/30. *Alpha*.—An unregistered person can sell salts of lemon.

129/23. *Gentian*.—We do not think anybody could get an injunction against you on the ground of the title only, in the absence of evidence of imitation of the style in which the article was put up or of customers being deceived.

MISCELLANEOUS INQUIRIES.

Back numbers containing formulæ, educational or other specific information can be obtained from the Publisher.

N.B.—All queries should be accompanied by the business card of a subscriber, or the address label from THE CHEMIST AND DRUGGIST wrapper. We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

Unsuitable Queries.—*Carbon* (no name or address); 124/36, *Buchu* (insufficient information regarding a sample for analysis). 52/34 (*Chemicus*) and 51/57 (*Statim*) send boot-blackening samples, simply requesting us to analyse them for them; but they give no particulars except that they want to imitate them. That sort of work we do not undertake. It is exclusively personal, and should be entrusted to a professional analyst. 55/19 (*Subscriber*), who inquires for symbols, sends neither name nor address.

41/66. *F. M.*—Spt. Ammon. Arom.—For the extemporaneous preparation of this spirit the following is the most satisfactory plan:—

Carbonate of ammonia	1 oz.
Strong solution of ammonia	1 oz.
Volatile oil of nutmeg	34 minims.
Oil of lemon	49 minims.
Rectified spirit	15 oz.
Water	3½ oz.

Dissolve the oils in the rectified spirit; reduce the carbonate of ammonia to small fragments, place it in a 10-oz. bottle, having an accurately-ground stopper; add the water and strong solution of ammonia; heat to 140° F.; shake till the carbonate is dissolved; allow to cool; filter if necessary; pour into the aromatised spirit gradually, and with constant stirring, and add sufficient distilled water to make the product measure 1 pint.

47/3. *Ambitious*.—You should, at any rate, pass the Minor before you emigrate to South Africa. Unqualified men are not wanted there, and we do not think that you stand any chance of a free passage. The steamship companies are not philanthropists. Consult file of *C. & D.* for particulars of salary, conditions of labour, &c.

49/5. *Bombay*.—Second-hand German Quinine.—The holders of this article are either speculators, with whom you, from India, cannot deal directly, or manufacturing and wholesale druggists, who will no doubt be glad to serve you on the best terms. Our market quotations are given as a general guide to prices, and you cannot do better than to leave your London representatives to buy for you. If you buy wholesale parcels—say, at least, 1,000 oz. at the time, on cash terms—they will no doubt be glad to supply you almost at our quotations.

48/25. *Wine*.—We have given a formula for non-excisable coca-wine in the current volume, page 335 (February 20).

49/25. *P. B.*—Please communicate with the soap-makers who advertise in the *C. & D.* and *DIARY*, or any who grind drugs. You will have no difficulty in getting what you want by consulting the Buyers' Guide in the *DIARY*.

49/23. *McAdam*.—If you are "Sceptic," your query was replied to on April 4.

49/34. *Erica*.—Argentamine.—See *C. & D. DIARY*, 1895, page 409.

48/64. *Beta*.—(1) See reply 41/22 in last issue. (2) Write to the makers of pharmaceutical apparatus who advertise in this journal.

18/54. *H. R.*—You are half hysterical on the point, and relief must come from your own self-reliance. You, as a chemist, ought to know perfectly well that the horror you have of an empty bottle is a thing which nobody can cure you of but yourself. We would gladly sympathise with you, but sympathy will do you more harm than good.

50/64. *The Wrekin*.—Our opinion is the same as yours. The idea is—a free cipher prescription and a costly bottle of physic.

50/26. *Pelagos*.—Salicylic acid, in the proportion of 1 gr. to the ounce, will help to keep the Godfrey's cordial, but you should boil the whole mixture for five minutes before adding it.

51/63. *Phenol*.—There is no immediate prospect of the coal-tar industry dying out, and we do not think that the decrease in "tarred palings" is a symptom of that. But we cannot advise you or anyone else to invest money in the industry while one of the largest concerns pays no dividend.

44/21. *Calcutta*.—Henna Hair dye.—A dye made from the powdered leaves of *Lawsonia inermis* is used in the form of a hot decoction by Oriental women, and it is supposed that the Parisian dye which Madame Patti made famous a few years ago was a preparation of henna. Perhaps it was a rectified-spirit tincture, but no definite information transpired. The dye imparts a reddish-brown colour to the hair.

52/63. *E. Williams*.—"The Brewing of Non-excisable Beers," by J. Pocock, Bangor (2s. 6d.).

52/10. *Egyptian* (Alexandria).—We presume that you mean Russia Leather. The genuine article is curried with birch-tar, but much of the leather passing by that name is sheepskin scented with ol. rusci essent., which is now a regular commercial article.

54/21. *Silurian*.—Colouring the Red Billiard-ball.—See the *C. & D.*, October 26, 1895, page 643.

54/17. *Nosvad*.—To Remove old Varnish from Woodwork, brush it with a mixture of ammonia solution (strong) 1 oz., and methylated spirit 15 oz. Hot solution of washing-soda is sometimes effectual, and if the wood is much darkened by it, the colour may be restored by sponging with dilute hydrochloric acid, followed by plain water.

54/19. *G. W. G.*—(1) You will find in Muter's "Manual of Chemistry" (Baillière, 6s.), in Clowes and Coleman's "Quantitative Chemical Analysis" (Churchill, 2s. 6d.), and Pearmain and Moir's "Aids to the Analysis of Food and Drugs" (Baillière, 3s. 6d.), directions for analysing beer and wines. (2) Animal charcoal will remove the colour from beer and stout under certain conditions, which, however, are altogether so prohibitive in the case of stout that it would be foolish to attempt it. You do not seem to understand that there is a limit to the charcoal's colour-absorption power, and that some colours are exceedingly difficult to withdraw from solution. Moreover, you do not tell us what

the object of your request is, and it is impossible for us to advise in some matters unless we know *all* the circumstances.

239/2. *L. Tompsett*.—See our issue of Feb. 8, page 238.

Analytical Queries.—We hope to reply next week to those which we have in hand.

INFORMATION SUPPLIED.

Stokes's Liniment.—Is not the following the original formula for Stokes's liniment?—

Oil of turpentine	..	..	..	3ij.
Acetic acid	..	..	..	3v.
Rose-water	..	..	..	3iiss.
Essence of lemon	..	..	..	3iv.
Yolk of an egg.				

Linimentum terebinthinæ aceticum, Dr. Stokes. (Beasley's "Pocket Formulary," 8th ed., 1866.)—J. F. BROWN. [The point of our query really is that custom differs in various parts of the country regarding Stokes's liniment. The facts of the matter (as far as we were then aware of them) were summed up in the *C. & D. DIARY*, 1894, page 379, where it is stated that in Ireland a mixture of chloroform, soap-liniment, and morphia is sold as the liniment, and in the north of Ireland an emulsion of turpentine and acetic acid (5 oz. each) and the yolk of an egg. We there point out that the formula quoted by Mr. Brown is "generally recognised as the proper article," and "is given for St. John Long's liniment." But whether the formula was Dr. Stokes's originally or not we cannot say, although bibliographic evidence seems to show that it is. The U.S. "National Formulary" gives it (with a slight modification) for "Linimentum terebinthinæ aceticum, [syn.] Lin. album., Stokes's Liniment, St. John Long's Liniment." A modification of the formula is also official in the Swiss Pharmacopœia as "Linimentum terebinthinæ compositum, syn. Linimentum Terebinthinæ Stokes." Hager gives a formula differing only in respect to quantities as "Linimentum Terebinthinæ Stokes," and mentions that St. John Long's balsam (an arcanum) is like it. At the same time he gives a veterinary linimentum St. Johannis, composed of ol. tereb. 30, vitell. ovi unius, aceti crudi 50. Squire states that lin. terebinth. acetic., B.P., is "an imitation of St. John Long's celebrated liniment." From these facts it appears that there is the opportunity of throwing more light upon the matter, especially upon the question, Did Dr. Stokes originate the formula quoted by Mr. Brown?—ED. *C. & D.*]

Since the foregoing was written, we have received the following note from Mr. Edwin FitzPatrick, 54 Lawn Lane, Ealing, W., which seems to solve the problem:—

I noticed in last week's issue of THE CHEMIST AND DRUGGIST an inquiry for the formula for "Mist. Stokesii." I presume the German apotheker wanted the formula of a well-known Dublin doctor's cough-mixture, as it is known by that name in Ireland. Dr. Stokes made a speciality of chest-diseases, and his name is associated with a peculiar kind of breathing seen in some lung-affections, known as Cheyne-Stokes respiration. I dispensed his prescriptions when living in Ireland for over a period of sixteen years, and "Mist. Stokesii" I have made up hundreds of times. I send you the formula for it, and also two liniments which he was always in the habit of ordering. One he called his chest-liniment, the other his rheumatic:—

Mist. Stokesii.

Liq. morphia acet.	..	..	..	3j.
Aq. laurocerasi	..	..	..	3iiss.
Syr. flor. aurant.	..	..	..	3iv.
Mucilag. acacie	..	..	..	3iij.
Aque ad	..	..	..	3vj.

M. Ft. mist. et signa.

A tablespoonful three or four times a day or when cough troublesome.

Dr. Stokes sometimes added codeia (3 gr.) to the above mixture; but the formula as written was the accepted one for mist. Stokesii.

Stokes's Chest-liniment.

Morphiæ acet.	..	..	..	3t. vj.
Chloroform. puri.	..	..	..	3j.
Lin. saponis ad	..	..	..	3iij.

M. Ft. lin. venena.

To be rubbed into the chest, back and front, every night.

Stokes's Rheumatic-liniment.

Ol. terebinthinæ	..	..	..	3iiss.
Acid. acetic.	..	..	..	3iiss.
Ovi vitelli	..	..	..	unius
Olei limonis	..	..	..	3j.
Aque rosæ ad	..	..	..	3viij.

M. Ft. lin.

To be rubbed into affected joints.

The above formula, I think, you will find in that invaluable materia medica, which is known as "Rawdon MacNamara," or "Neligan's Medicines," which, unfortunately, has gone out of date. I think in that book it is called St. John Long's liniment, or, lin. terebinth. acet. comp.

EDWIN FITZPATRICK.

INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

- 52/64. Manufacturer to the trade for splints of all kinds.
- 52/68. Locke's camphorina: where obtainable?
- 46/69. Maker of articanus powder for preserving milk.
- 48/64. Packers of powdered Arsenical sheep-dips in provinces; also makers of paste-dips.
- 53/4. Balsamo Del Deseto: what is it and where obtainable?

Next Week.

Monday, April 20.

Society of Arts, John Street, Adelphi, W.C., at 8 p.m.
"Precious Stones," by Professor Henry A. Miers, M.A.
(Cantor Lecture, II.).

Tuesday, April 21.

Royal Photographic Society, 12 Hanover Square, W., at 8 p.m.
"Photo-mechanical Notes of Historical Interest," by T. Bolas, F.I.C., F.C.S.

Wednesday, April 22.

Meeting of Nottingham and District Chemists at the Masonic Hall, Goldsmith Street, at 8.30 p.m. The anti-cutting question, as put before the meeting by a deputation from the Proprietary Articles Trade Association, will be considered.

Midland Chemists' Assistants' Association, at Exchange Rooms, Birmingham, at 9 p.m. Paper: "The Spectroscope and some of its Work," by F. Smith.

Society of Arts, John Street, Adelphi, W.C., at 8 p.m.
"The Perfected Photochromoscope and its Colour-photographs," by Mr. F. E. Ives.

Thursday, April 23.

Chemical Society, Burlington House, at 8 p.m. Papers to be read: "On the Temperature of Certain Flames," by Professor W. N. Hartley, F.R.S.; "Halogen Additive Products of Substituted Thiosunamines," by Augustus E. Dixon, M.D.; "The Constitution of the Cereal Celluloses," by C. F. Cross, E. J. Bavau, and Claud Smith; "An Apparatus for the Detection of Boric Acid," by W. M. Doherty; "Ethereal Salts of Optically Active Malic and Lactic Acids," by Professor Purdie, F.R.S., and S. Williamson, Ph.D.

Liverpool Chemists' Association. "Notes on Cream of Tartar, Sodium Bromide, and Extract of Malt," by Mr. M. Conroy.

Royal Institution of Great Britain, at 3 p.m. Professor Dewar on "Recent Chemical Progress."

Friday, April 24.

Royal Institution of Great Britain, at 9 p.m. Professor G. V. Poore, M.D., on "The Circulation of Organic Matter."

Edinburgh Pharmacy Athletic Club Annual General Meeting, at 36 York Place, at 9.15 p.m.